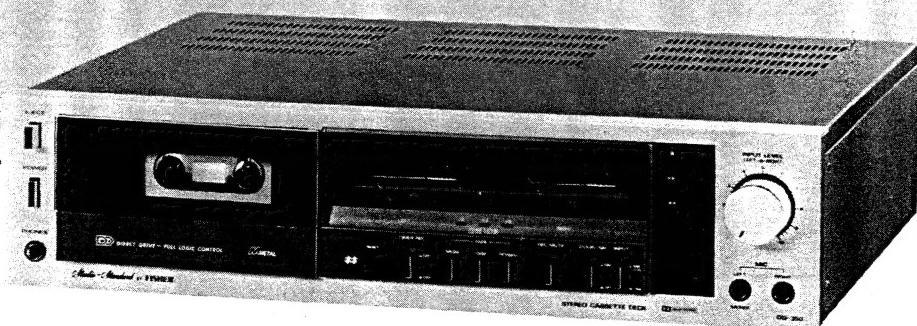


SERVICE MANUAL

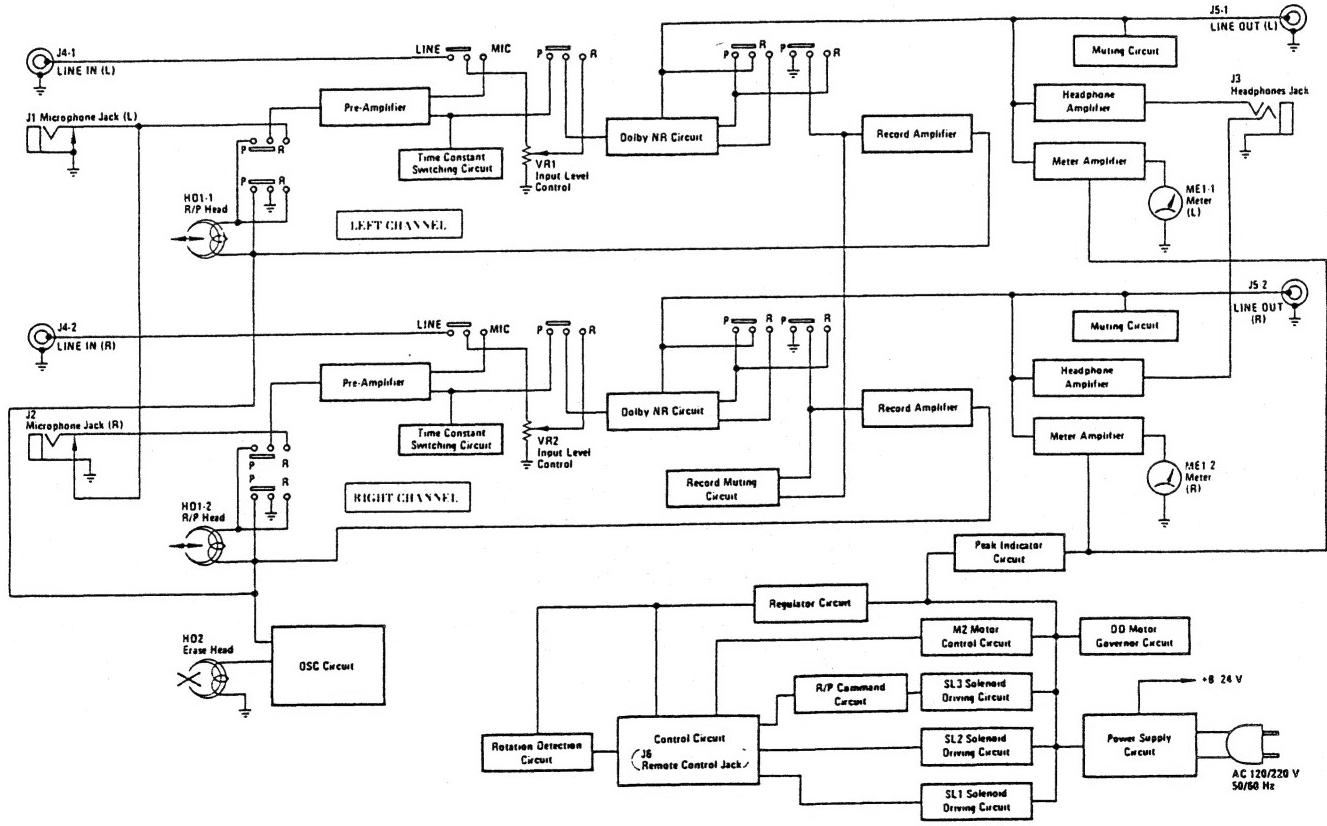
FISHER
DD-350

**Stereo Cassette Deck
(EUROPE)**



The first name in high fidelity

FUNCTIONAL BLOCK DIAGRAM



SPECIFICATIONS

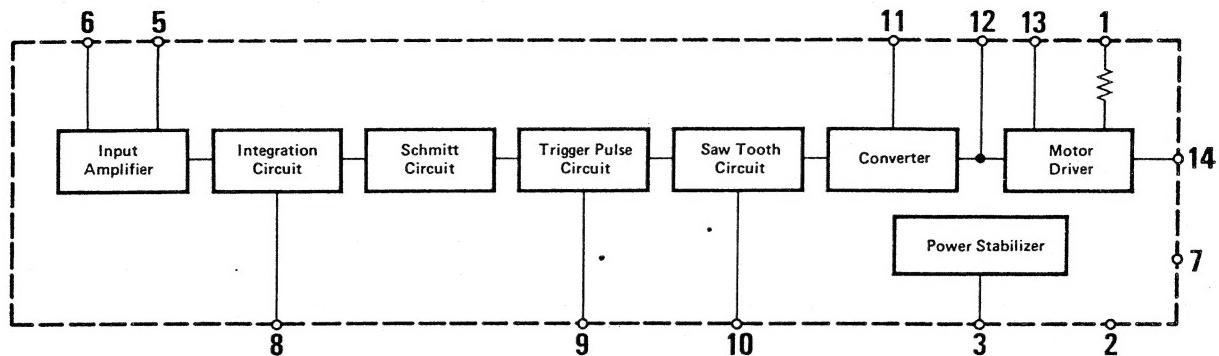
CASSETTE DECK	DD-350
Motor	1 Direct Drive, DC Servo 1 DC Governor
Cassette Loading	Front
Drive System	1 Capstan
Number of Heads	2
Head Material	MX/Ferrite
Operation	Solenoid
Wow & Flutter	0.04 % WRMS
Signal-to-Noise Ratio (CCIR Weighted)	
Dolby* Off	54 dB
Dolby* On	62 dB
Erase Ratio	70 dB
Channel Separation	40 dB
Signal Crosstalk	70 dB
Frequency Response	
Normal Tape (± 3 dB)	40 Hz – 14 kHz
CrO ₂ Equivalent Tape (± 3 dB)	40 Hz – 15 kHz
Metal Tape (± 3 dB)	40 Hz – 15 kHz
Total Harmonic Distortion	
at 0 VU	1.5 %
Fast Forward/Rewind Time	
(C-60)	90 sec.
Level Indicators	2 VU Meters 3 L.E.D. Peak Indicators
Inputs (Sensitivity/Impedance)	Microphone 1.0 mV/10 k Ω Line 100 mV/50 k Ω
Output (Level at 0 VU/Impedance)	Line 500 mV/5 k Ω
Tape Select Buttons	Normal, CrO ₂ , Metal
Tape Counter	Mechanical
Power Requirements	120/220 V, 50/60 Hz
Power Consumption	37 W
Dimensions (W x H x D)	440 x 100 x 270 mm
Weight (approx.)	6 kg

*Dolby is registered trademark of Dolby Laboratories.

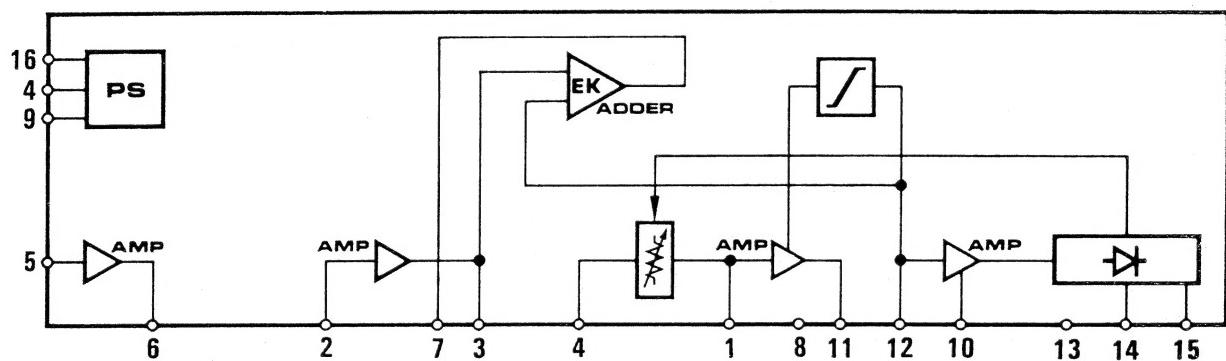
Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify any design or specifications without notice and without incurring any obligation.

IC SIGNAL FLOW & EQUIVALENT CIRCUIT

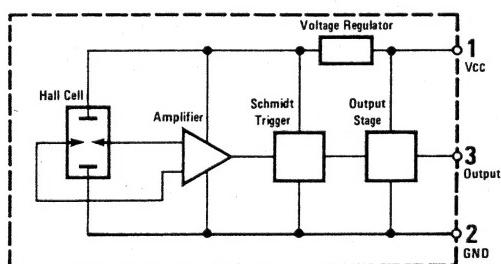
LB1601 SIGNAL FLOW



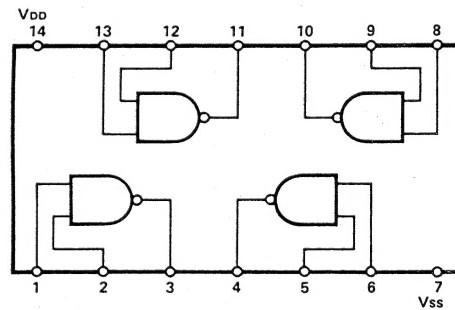
NE646B SIGNAL FLOW



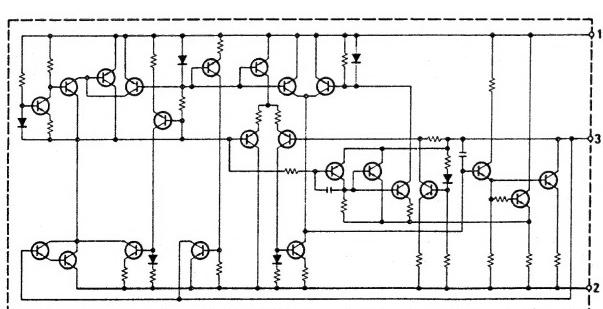
DN6839 SIGNAL FLOW



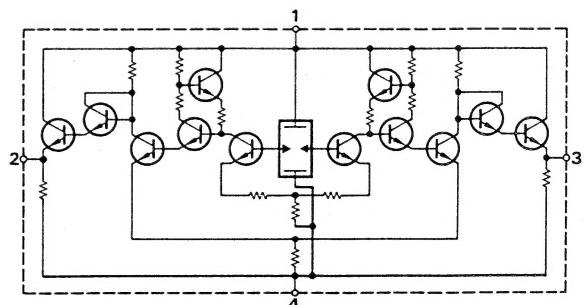
LC4011 SIGNAL FLOW



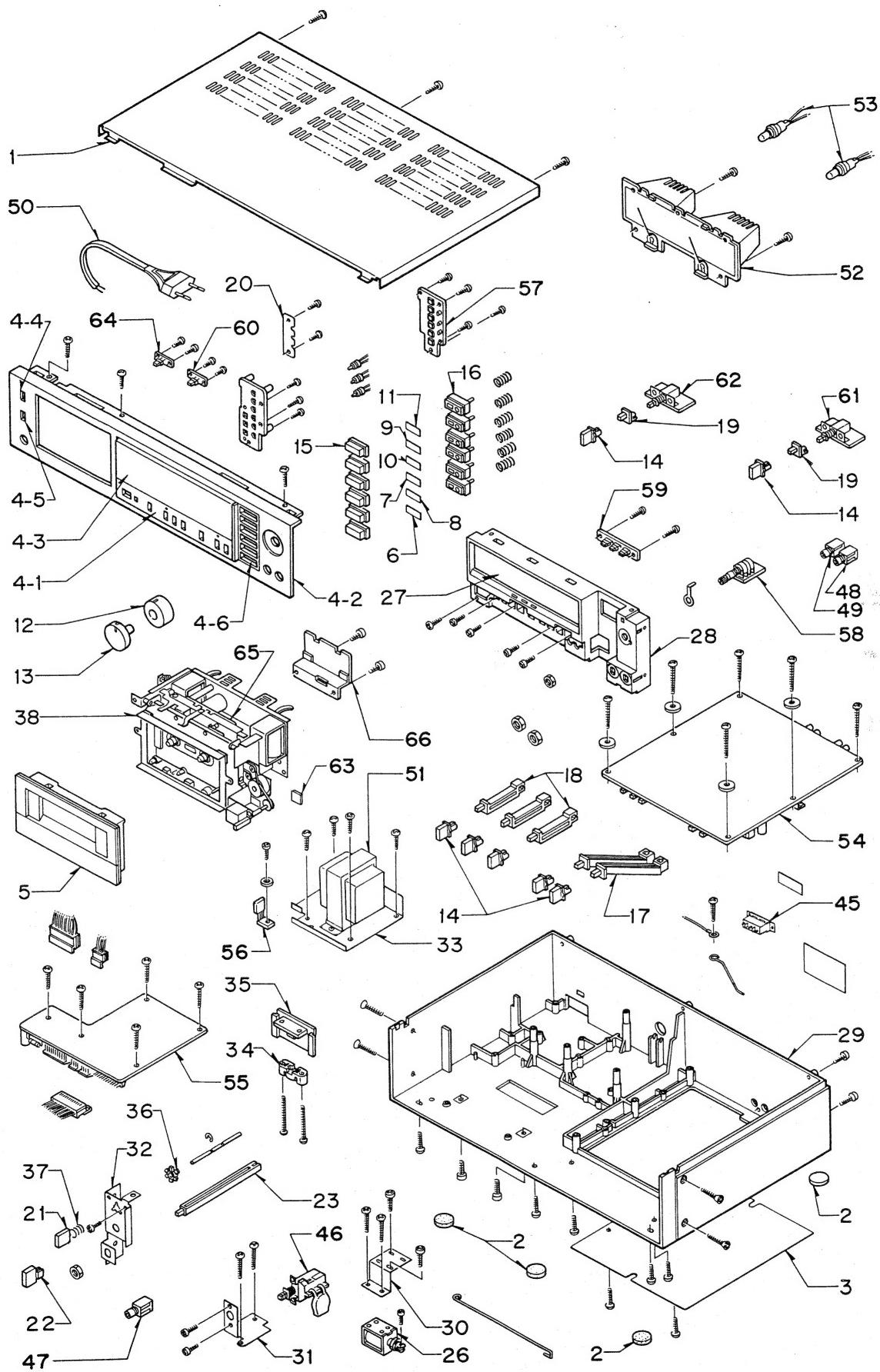
μ PC1447H EQUIVALENT CIRCUIT



DN835 EQUIVALENT CIRCUIT



CABINET & CHASSIS EXPLODED VIEW



PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
131 6 1169 01101	Box Corrugate-EXP	
131 6 2119 02131	Bag Polyethylene-EXP	
141 6 1449 65000	Case Styrofoam (Right)	
141 6 1449 65100	Case Styrofoam (Left)	
141 6 3119 19800	Pad	

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
131 0 4004 11502	Wire Shield Assy	
131 6 2719 10801	Bag Fan	
131 6 4119 88401	Explanatory Booklet	
131 6 4519 15700	Guarantee Certificate	

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 2 1410 26900	Cover
2	141 2 1749 02500	Leg
3	141 2 2449 33400	Panel Sheet

APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
4	131 0 1016 39902	Panel Decorative Assy
4-1	131 2 1110 31501	Plate Decorative
4-2	131 2 1203 54702	Panel Control
4-3	131 2 1205 26500	Decorative Plate Dial
4-4	131 2 6113 44800	Shelter
4-5	131 2 6113 44900	Shelter
4-6	131 2 6113 45000	Shelter
5	131 0 2022 11300	Lid Assy
6	131 2 1310 38400	Name Plate (Record)
7	131 2 1310 38401	Name Plate (Play)
8	131 2 1310 38402	Name Plate (Pause)
9	131 2 1310 38403	Name Plate (Stop)
10	131 2 1310 38404	Name Plate (F.FWD)
11	131 2 1310 38405	Name Plate (Rewind)
12	131 0 1001 60900	Knob Assy (Input Level)
13	131 0 1001 61000	Knob Assy (Input Level)
14	131 2 1601 61001	Knob (Push Switch)
15	131 2 1601 73300	Knob
16	131 2 1601 74100	Knob
17	131 2 1601 74200	Knob (Dolby, Input Joint)
18	131 2 1601 74300	Knob (Tape Position Joint)
19	131 2 1601 74400	Knob (Mute, Record Joint)
20	131 2 3101 80100	Metal Mount
21	141 0 1619 28700	Button Eject Assy

APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
22	141 2 1619 74700	Knob Power (Power)
23	141 2 1619 75000	Knob Joint

CHASSIS PARTS LIST

Ref. No.	Parts Number	Description
26	4 2649 70380	Plunger
27	131 2 1110 31300	Plate Decorative
28	* 131 2 3305 32600	Panel Front
29	* 131 2 3301 28400	Chassis Cabinet
30	141 2 3519 50600	Bracket Plunger
31	141 2 3519 50700	Bracket Switch
32	141 2 3519 50800	Bracket Chassis
33	141 2 3719 05600	Bracket Transformer
34	141 2 3899 06900	Clampe Line Cord
35	141 2 3899 08300	Holder Cord
36	141 2 5739 05700	Bushing
37	141 2 8519 34400	Spring Lever Stop
38	4 1412 00020	Cassette Deck Unit

ELECTRICAL PARTS LIST

Ref. No.	Parts Number	Description
45	▲ 4 2319 72140	Switch Slide
46	▲ 4 2319 72356	Power Switch
47	4 2359 73902	1P Jack
48	4 2359 73903	Mic Jack (R)
49	4 2359 74010	Mic Jack (L)
50	▲ 4 2439 70350	Line Cord
51	▲ 4 2519 73250	Power Transformer
52	4 5112 00540	Meter Assy
53	4 6129 70480	Meter Lamp
54	* 131 0 4001 08161	RP, PB, PRE, OSC P.C.B. Assy
55	* 131 0 4001 08171	Control P.C.B. Assy
56	* 131 0 4001 08190	Regulator P.C.B. Assy
57	* 131 0 4001 08200	Switch Board P.C.B. Assy
58	* 131 0 4001 08220	Volume P.C.B. Assy
59	* 131 0 4001 08230	Peak Level P.C.B. Assy
60	* 131 0 4001 08240	Dolby Ind. P.C.B. Assy
61	* 131 0 4001 08250	Rec Mute P.C.B. Assy
62	* 131 0 4001 08260	Timer P.C.B. Assy
63	* 131 0 4001 08270	Hall IC P.C.B. Assy
64	* 131 0 4001 08340	L.E.D. P.C.B. Assy
65	* 131 0 3519 19100	DD Governor P.C.B. Assy
66	* 131 0 4001 08180	Sub Control P.C.B. Assy
C01	C2GYDP103A-S	Ceramic 0.01 μ F 400V +100,-0%

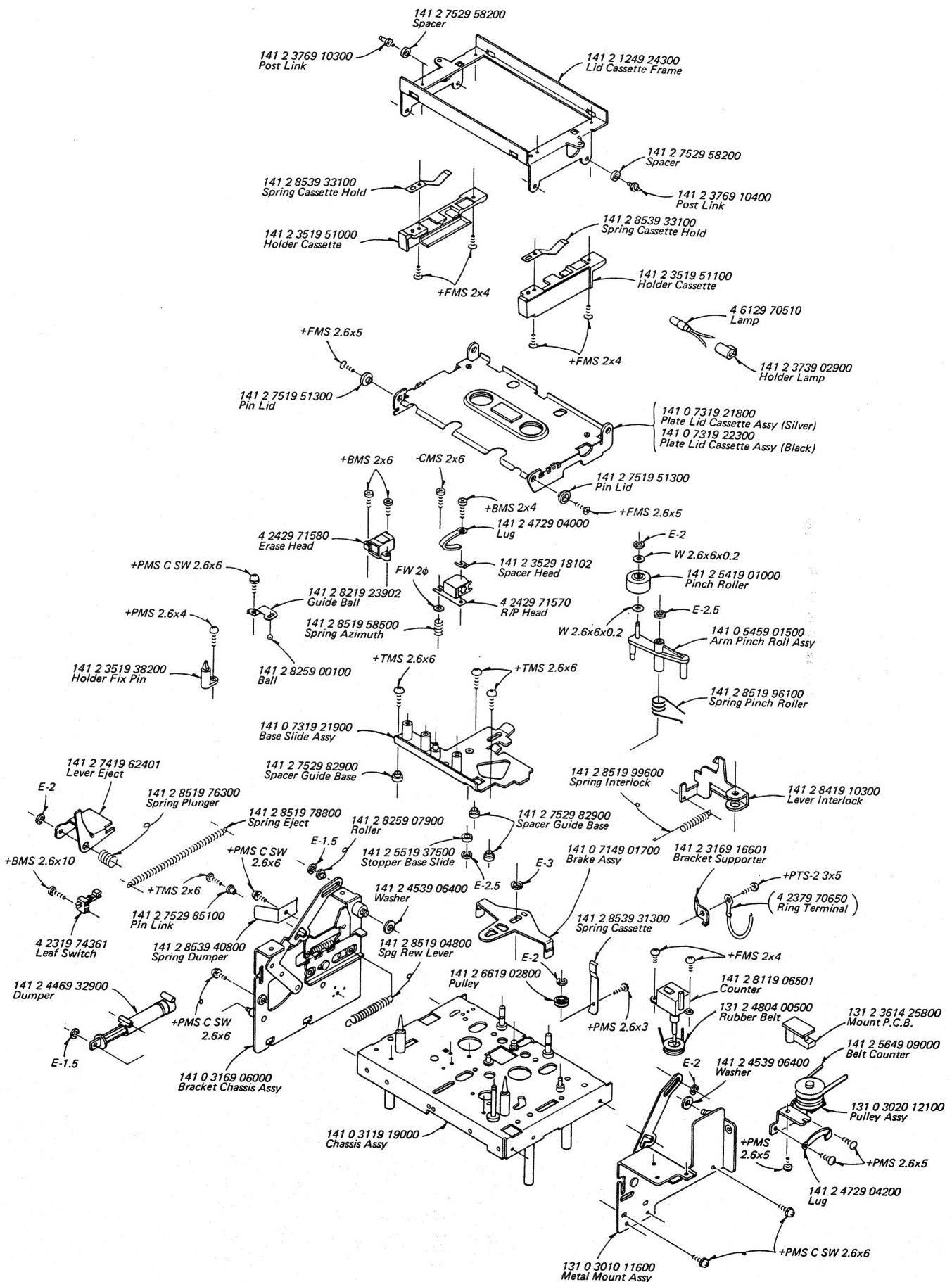
*—Not a Service Part.

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF AN UNIT. COMPONENTS INDICATED BY A MARK ▲ IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAS SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

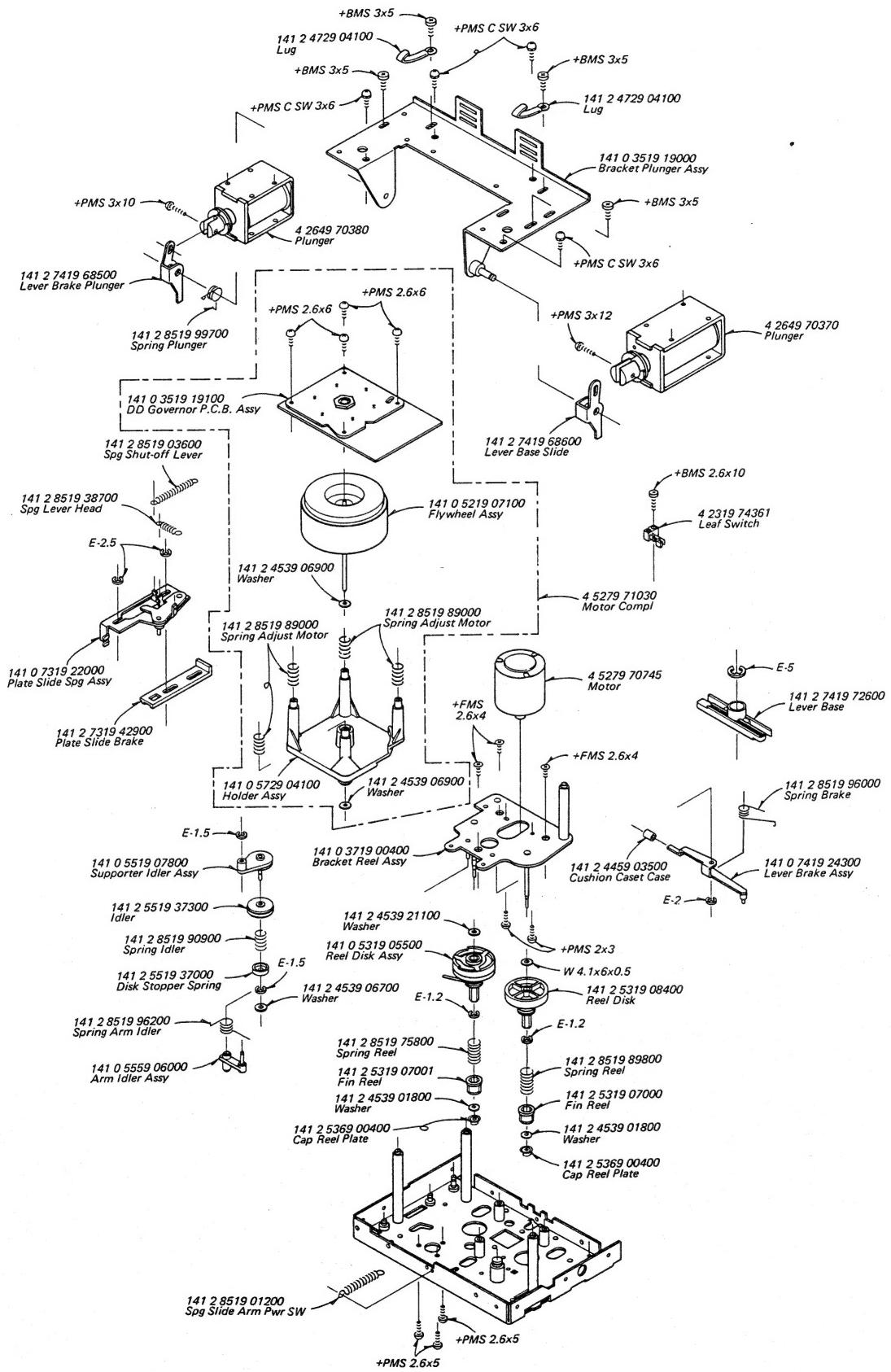
CASSETTE DECK EXPLODED VIEW

(TOP VIEW)



CASSETTE DECK EXPLODED VIEW (Continued)

(BOTTOM VIEW)



MECHANICAL ADJUSTMENTS

EQUIPMENT REQUIRED

- Phillips screwdriver
- Flat-bladed screwdriver
- A pair of round-nose pliers
- A pair of nippers
- Cassette Tape
- Paint or glue
- Wow and flutter meter

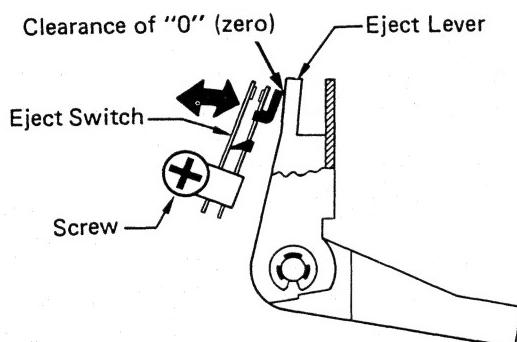
GENERAL REMARKS

- Before adjusting the mechanism of the unit, wipe the tape contacting surfaces clean with a soft cloth soaked in alcohol.

EJECT SWITCH ADJUSTMENT

The Eject Switch is turned on by pushing the Eject button, so that the unit is released from any modes and set in the stop mode. After that, the cassette holder opens slowly.

1. Check that the clearance between the Switch and Eject Lever becomes "0" (zero) when the cassette holder is closed and the Eject button is slightly pushed.
2. If necessary, loosen the screw fastening the Switch and move the Switch to the specified position as illustrated.



3. After the adjustment, tighten the fastening screw and secure it with paint or glue.

NOTE:

The clearance of the switch contacts should be approximately 0.5mm.

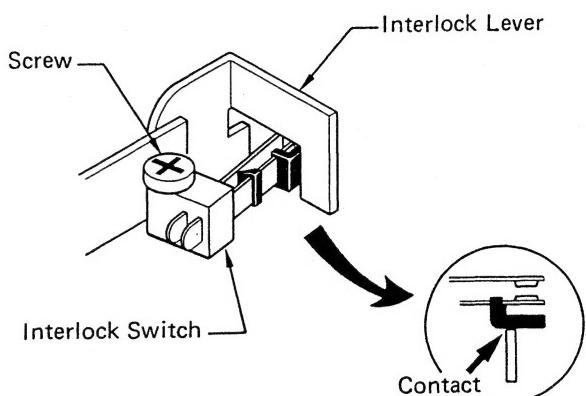
INTERLOCK SWITCH ADJUSTMENT

It can be checked whether the flaps on the rear of the cassette are removed or not by pressing this switch lever. If the switch does not function, no recording can be made by pressing the Record button. This switch performs the following functions to prevent a recording error.

- When the cassette has the flaps or the cassette holder is opened, this switch is turned on.
- When the cassette has no flaps or the cassette holder is closed without a cassette inserted into the cassette holder, this switch is turned off.

Perform the switch adjustment as follows:

1. Close the cassette holder without a cassette inserted into the cassette holder. Loosen the screw fastening the switch and bring the switch in contact with the Interlock Lever as illustrated. Then, tighten the fastening screw.



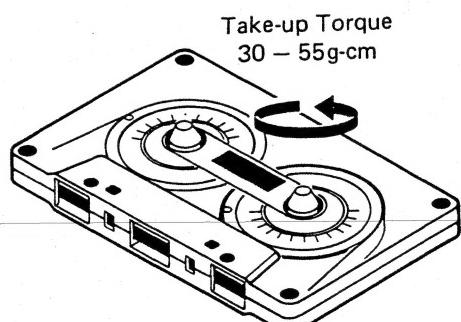
2. Insert a cassette into the cassette holder. Then, alternately open and close the cassette holder and check to see that the switch functions correctly.
3. After the adjustment, secure the fastening screw with paint or glue.

NOTE:

Before this adjustment, remove the Mechanism Chassis from the unit. Also remove the Plunger Bracket from the Mechanism Chassis. The clearance of the switch contacts should be approximately 0.5mm.

TAKE-UP TORQUE ADJUSTMENT

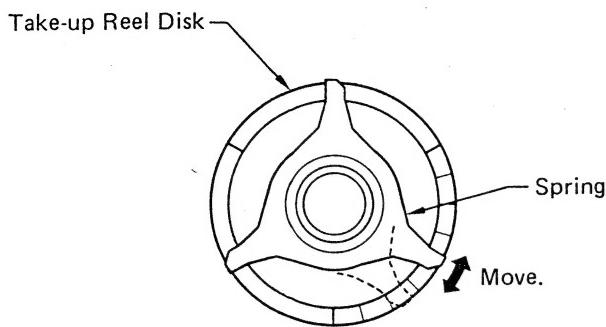
1. Insert the cassette-type torque meter (100g-cm Max.) into the cassette holder and set the unit in the playback mode. The torque meter should read 30 – 55g-cm.



Cassette-type Torque Meter

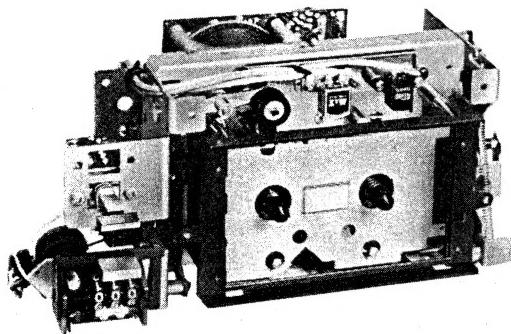
2. If necessary, adjust the take-up torque by moving the spring of the Take-up Reel Disk as illustrated.

MECHANICAL ADJUSTMENTS (Continued)



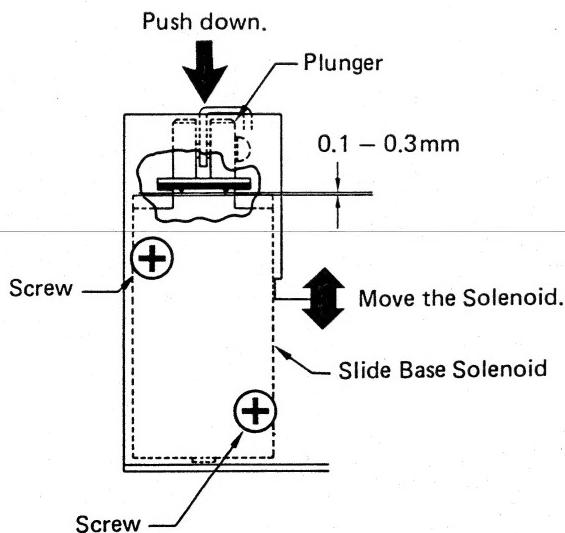
SOLENOID ADJUSTMENT

Two Solenoids are used in the Mechanism Chassis. Remove the Mechanism Chassis from the unit by following its removal instruction and turn over the Chassis as illustrated. Then, adjust the solenoid positions.



SLIDE BASE SOLENOID ADJUSTMENT

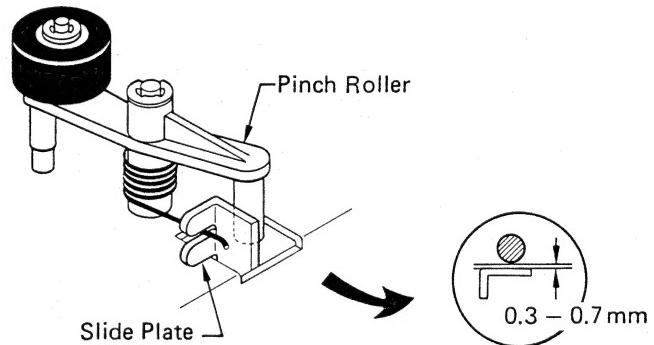
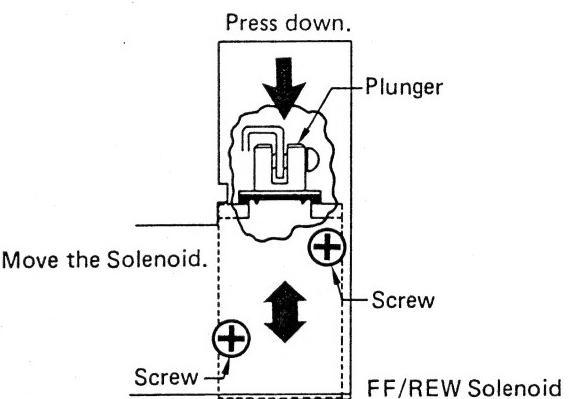
1. Loosen two screws fastening the Slide Base Solenoid and slowly press down the Plunger of the Slide Base Solenoid.
2. When the Slide Base is fully pressed down, the clearance between the Solenoid and Plunger should be 0.1 – 0.3mm.
3. If necessary, adjust the clearance by moving the solenoid position as illustrated.



4. After the adjustment, tighten the screws fastening the Solenoid and secure them with paint or glue.

F.FWD/REW SOLENOID ADJUSTMENT

1. While keeping the Plunger of the Slide Base Solenoid pressed down, fully press down the Plunger of the F.FWD/REW Solenoid.
2. Check that the clearance between the Pinch Roller and Slide Plate is 0.3 – 0.7 mm as illustrated.



3. If necessary, loosen two screws fastening the F.FWD/REW Solenoid and move the Solenoid until the specified clearance is obtained.

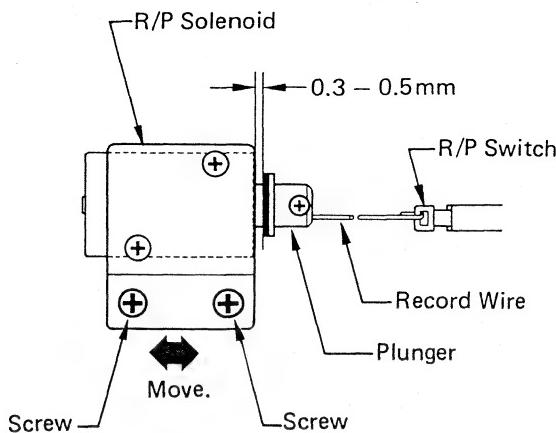
NOTE:

When two Solenoids are not positioned correctly, the Solenoid may not pull the Plunger or the tape will be damaged.

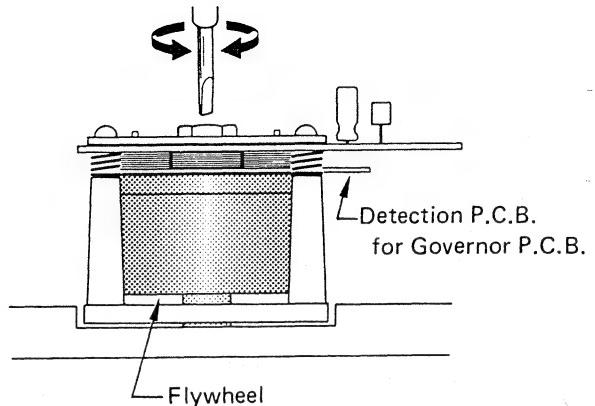
R/P SOLENOID ADJUSTMENT

1. Remove the Cover and Sheet Panel from the unit by following their removal instructions. Then, remove the Control P.C.Board.
2. Slowly press the Plunger of the R/P Solenoid, observing the R/P Switch on the Amplifier P.C.Board.
3. When the R/P Switch is completely changed over, check that the clearance between the Solenoid and Plunger is 0.3 – 0.5mm.

MECHANICAL ADJUSTMENTS (Continued)



Turn the flywheel adjusting screw.



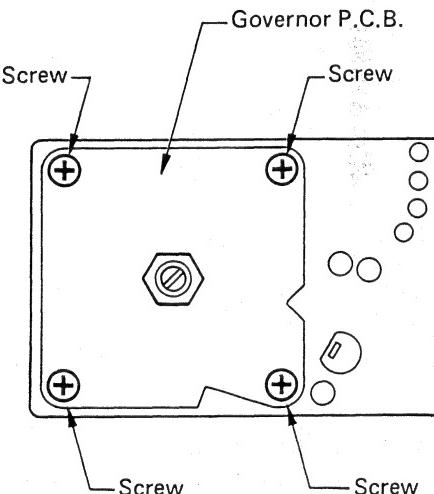
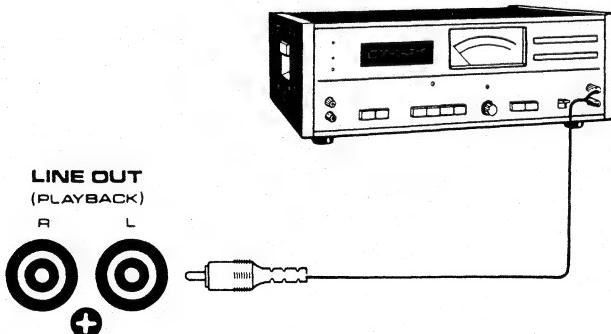
4. If necessary, loosen the screws fastening the Solenoid and move the Solenoid until the specified clearance is obtained.
5. After the adjustment, tighten the fastening screws and secure them with paint or glue.

D.D. MOTOR ADJUSTMENT

After the D.D. (Direct Drive) Governor P.C.Board has been removed or replaced, perform this adjustment by the following procedure.

1. Mount the D.D. Motor Governor P.C.Board to the Motor Holder by tightening four screws.
2. Connect the wow and flutter meter to the right or left channel LINE OUT as illustrated and insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette holder. While playing back the test tape, perform the adjustment as follows.

Wow and Flutter Meter



4. Then, turn four screws fastening the Governor P.C.Board until the wow and flutter meter reads less than 0.04%.
5. Perform the adjustment in Item 3 again and then, secure the Flywheel Adjusting Screw and four screws fastening the D.D. Governor P.C.Board with paint or glue.
6. After the adjustment, perform the Tape Speed Adjustment by following its adjusting procedure.

3. Slowly turn the Flywheel Adjusting Screw counter-clockwise until the Flywheel comes in contact with the Detection P.C.Board on the D.D. Governor P.C.Board, and also turn the Adjusting Screw clockwise by 270° from the position as illustrated.

ELECTRICAL ADJUSTMENTS

EQUIPMENT REQUIRED

- VTVM (2 sets)
- Frequency Counter
- Attenuator
- Dummy Load
 - * 47k-ohm Dummy Load: used when the output is obtained from LINE OUT
- Audio Signal Generator
- Dualtrace Synchroscope
- Test Tapes
 - * 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
 - * 10kHz Test Tape (Example: TEAC MTT-114) for Head Azimuth Adjustment
 - * Test Tape (Example: TEAC MTT-150 for DOLBY Calibration Level) for Playback Sensitivity Adjustment
- Tapes for recording and playback
 - * Normal Tape (Example: TDK AC-221)
 - * Chrome Tape (Example: TDK AC-512)
 - * Metal Tape (Example: TDK AC-711)
- Alignment Tool

Before the Electrical Adjustment, set the measuring instruments as follows:

- Input Select Switch LINE
- DOLBY NR Switch OFF
- Tape Select Switch NORMAL
- Timer Record Switch OFF
- Input Level Control Maximum
- Audio Signal Generator Output 1kHz 0dB, 1V

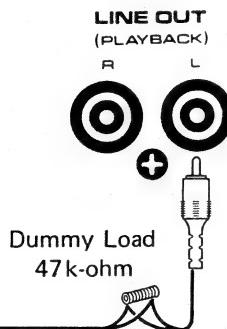
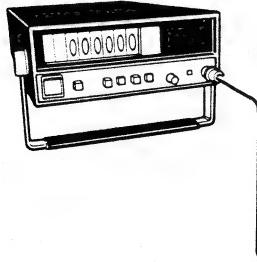
NOTE:

1. Perform the adjustment in the order described in this manual.
2. Use C125 and C225 (plus sides) in the Amplifier P.C.Board as test points (TP101 and TP201) for the adjustment.

APE SPEED ADJUSTMENT

1. Remove the Cover from the unit and connect the frequency counter to the left or right channel LINE OUT as illustrated. Then, insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette holder.

Frequency Counter
3kHz (± 15 Hz)



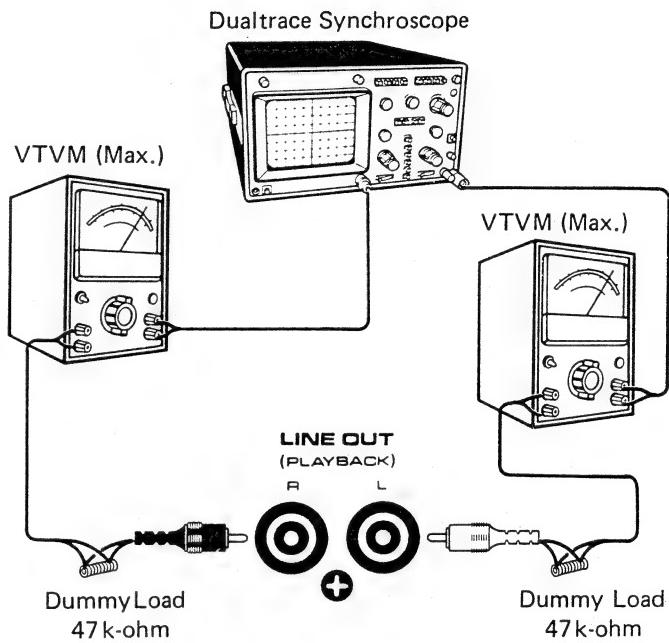
2. While playing back the test tape, adjust the tape speed by turning the potentiometer (P601) in the D.D. Motor Control P.C.Board until the frequency counter reads 3kHz (± 15 Hz).

HEAD AZIMUTH ADJUSTMENT

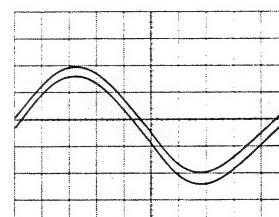
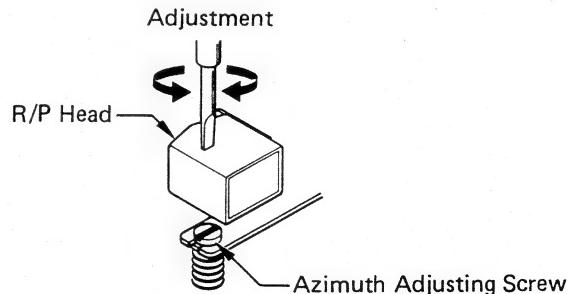
1. Connect the dualtrace synchroscope and the VTVM to the both channel LINE OUT as illustrated and then, set the dualtrace synchroscope as follows:
 - * MODE CHOP (chopped)
 - * SOURCE INT. (internal), CH1 or CH2
 - * SWEEP MODE Auto (automatic)

NOTE:

Adjust the field on the synchroscope with the VOL. ADJ. and TIME ADJ.



2. Insert a 10kHz test tape (Example: TEAC MTT-114) into the cassette holder and set the unit in the playback mode.
3. While playing back the test tape, slowly turn the azimuth adjusting screw until the amplitudes of the right and left channel signal wave forms are at maximum and both wave forms are superimposed. Set to optimum at maximum reading of the VTVMs.



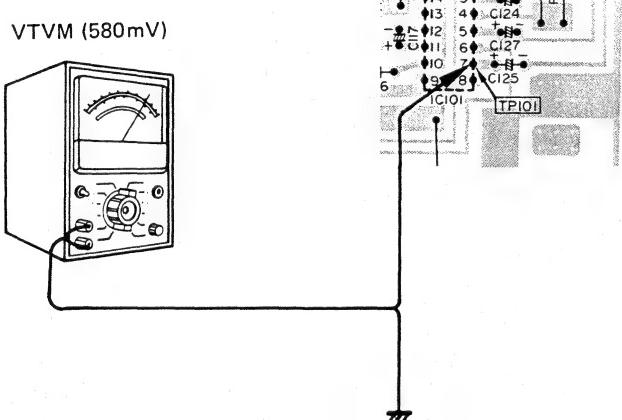
ELECTRICAL ADJUSTMENTS (Continued)

- After the adjustment, secure the azimuth adjusting screw with paint or glue.

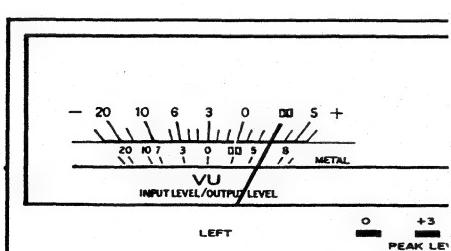
PLAYBACK AND METER SENSITIVITY ADJUSTMENT

RIGHT CHANNEL

- Connect the VTVM to the test point TP101 (plus side of C125) as illustrated and insert the test tape for Dolby Level Calibration (Example: TEAC MTT-150) into the cassette holder.

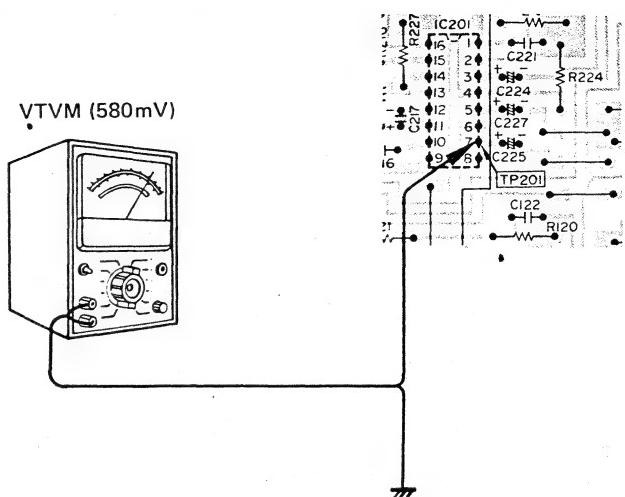


- While playing back the test tape, adjust the potentiometer (P104) until the signal output of the test tape becomes 580mV on the VTVM.
- While keeping the unit in the above condition, adjust the potentiometer (P105) until the pointer of the left channel Meter swings to +3VU (DOLBY mark position) as illustrated.



LEFT CHANNEL

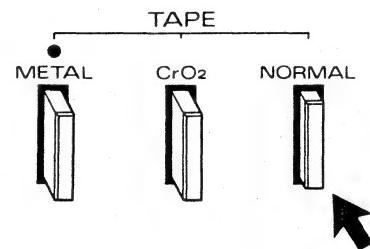
Connect the VTVM to the test point TP201 (plus side of C225) and adjust the potentiometers (VR204 and VR205) for the right channel by following the same procedure as LEFT CHANNEL.



RECORDING AND PLAYBACK FREQUENCY RESPONSE ADJUSTMENT

For Normal Tape

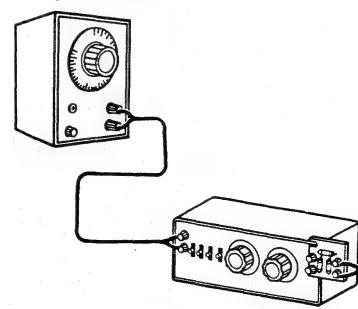
Set the Tape Select Switch to NORMAL and insert a normal tape (Example: TDK AC-221) into the cassette holder. Then, perform the adjustment by the following procedures.



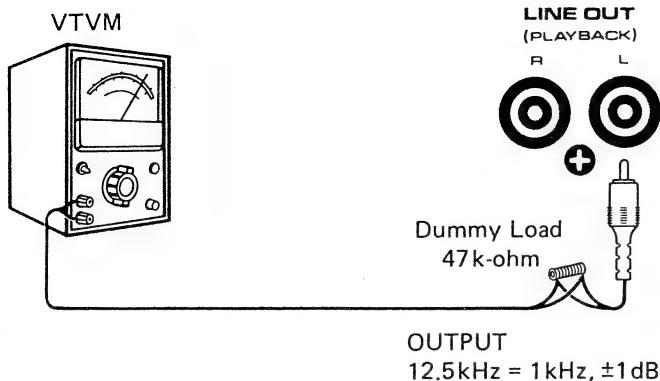
LEFT CHANNEL

- Connect the audio signal generator and the attenuator to the left channel LINE IN, and the VTVM to the left channel LINE OUT as illustrated.

Audio Signal Generator
1kHz, 12.5kHz



ELECTRICAL ADJUSTMENTS (Continued)



2. Alternately record the 1kHz and 12.5kHz signals at -46dB (5mV) from the audio signal generator on the tape several times.
3. While playing back the recorded signals, check that the 12.5kHz signal output is identical to the 1kHz signal output or the deviation is ±1dB on the VTVM.
4. If not, adjust the potentiometer (VR101) and re-check the output of each signal by playing back the signals after the recording operation for the signals.
5. Repeat the above adjustment until the specified output is obtained.

RIGHT CHANNEL

Connect the audio signal generator and the attenuator to the right channel LINE IN, and the VTVM to the right channel LINE OUT. Then, adjust the potentiometer (VR201) for the right channel by following the same procedure as LEFT CHANNEL.

For Chromium Dioxide Tape

Set the Tape Select Switch to CrO₂ and insert a chromium dioxide tape (Example: TDK AC-512) into the cassette holder. Then, adjust the potentiometers by following the conditions described below and the same procedure as for Normal Tape.

* Input Signals	1kHz and 14kHz
* Input Level	-46dB (5mV)
* Potentiometers for adjustment	
Left channel	VR102
Right channel	VR202

For Metal Tape

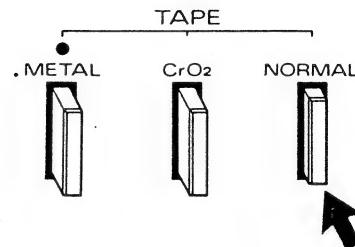
Set the Tape Select Switch to METAL and insert a metal tape (Example: TDK AC-711) into the cassette holder. Then, adjust the potentiometers by following the conditions described below and the same procedure as for Normal Tape.

* Input Signals	1kHz and 14kHz
* Input Level	-46dB (5mV)
* Potentiometers for adjustment	
Left channel	VR103
Right channel	VR203

RECORDING AND PLAYBACK SENSITIVITY ADJUSTMENT

For Normal Tape

Set the Tape Select Switch to NORMAL and insert a normal tape (Example: TDK AC-221) into the cassette holder. Then, perform the adjustment by the following procedure.

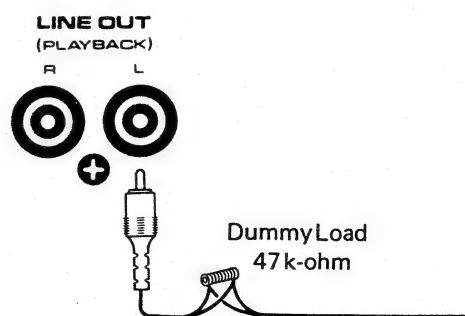
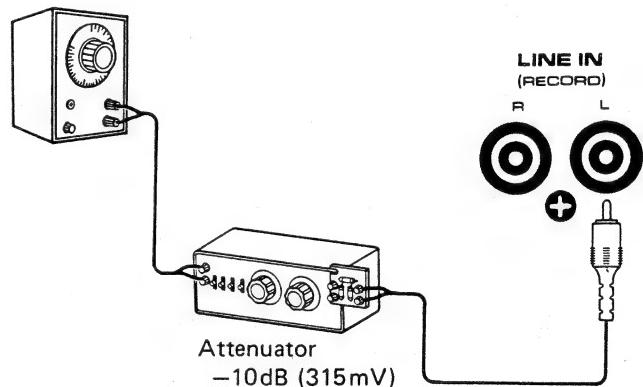


LEFT CHANNEL

1. Connect the audio signal generator and the attenuator to the left channel LINE IN, and the VTVM to the left channel LINE OUT as illustrated.

Audio Signal Generator

1kHz



ELECTRICAL ADJUSTMENTS (Continued)

2. Set the unit in the recording standby mode by pressing the Pause button first and then, the Record and Play buttons.
3. Feed the 1kHz signal from the audio signal generator at -10dB (315mV) into the unit and adjust the left channel Input Level Control (VR101) until the VTVM reads 300mV. After the adjustment, release the pause mode by pressing the Pause button and record the signal on the tape.
4. While playing back the recorded signal, check that the signal output is 300mV (± 1 dB) on the VTVM.
5. If necessary, adjust the potentiometer (VR106) and repeat the recording and playback operations.
6. Repeat the above adjustment until the specified output is obtained.

RIGHT CHANNEL

Connect the audio signal generator and the attenuator to the right channel LINE IN, and the VTVM to the right channel LINE OUT. Then, adjust the right channel Input Level Control (VR201) and the potentiometer (VR206) for the right channel by following the same procedure as LEFT CHANNEL.

• For Chromium Dioxide Tape

Select the Tape Select Switch to CrO₂ and insert a chromium dioxide tape (Example: TDK AC-512) into the cassette holder. Then, feed the 1kHz signal from the audio signal generator at -10dB (315mV) into the unit and perform the adjustment by following the same procedure as for Normal Tape.

LEFT CHANNEL

Select the pattern on the collector side of the Transistor Q111 and one of the patterns (1 - 4) of the Resistors R157 - R160 and connect them, so that the output of the 1kHz signal becomes 300mV (± 1.5 dB) on the VTVM.

RIGHT CHANNEL

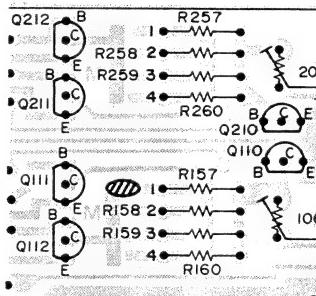
Select the pattern on the collector side of the Transistor Q211 and one of the patterns (1 - 4) of the Resistors R257 - R260 and connect them, so that the output of the 1kHz signal becomes 300mV (± 1.5 dB) on the VTVM.

• For Metal Tape

Select the Tape Select Switch to METAL and insert a metal tape (Example: TDK AC-711) into the cassette holder. Then, feed the 1kHz signal from the audio signal generator at -10dB (315mV) into the unit and perform the adjustment by following the same procedure as for Normal Tape.

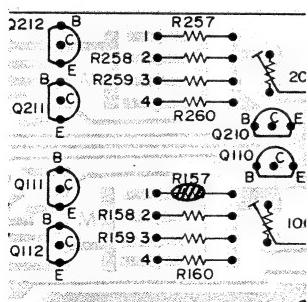
LEFT CHANNEL

Select the pattern on the collector side of the Transistor Q112 and one of the patterns (1 - 4) of the Resistors R157 - R160 and then, connect them, so that the output of the 1kHz signal becomes 300mV (± 1.5 dB) on the VTVM.

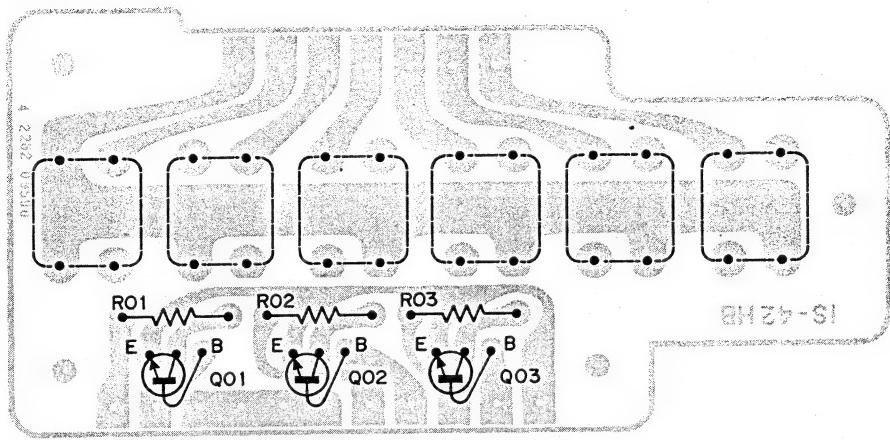


RIGHT CHANNEL

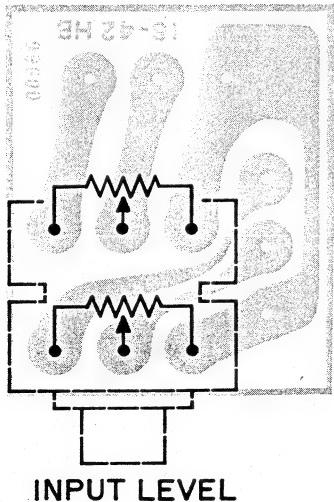
Select the pattern on the collector side of the Transistor Q212 and one of the patterns (1 - 4) of the Resistors R257 - R260 and then, connect them, so that the output of the 1kHz signal becomes 300mV (± 1.5 dB) on the VTVM.



SWITCH BOARD P.C.BOARD (BOTTOM VIEW)



VOLUME P.C.BOARD (BOTTOM VIEW)

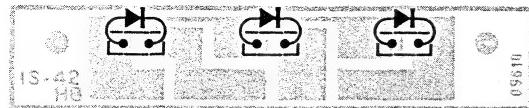


REGULATOR P.C.BOARD (BOTTOM VIEW)



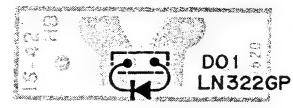
PEAK LEVEL P.C.BOARD

(BOTTOM VIEW)



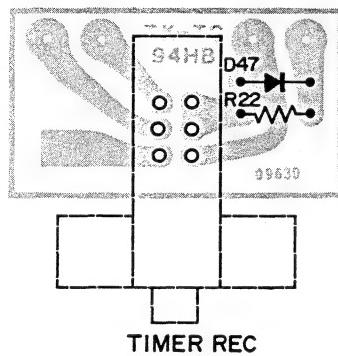
DOLBY IND. P.C.BOARD

(BOTTOM VIEW)



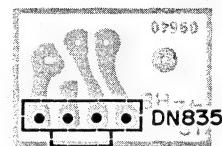
TIMER P.C.BOARD

(BOTTOM VIEW)



HALL IC P.C.BOARD

(BOTTOM VIEW)



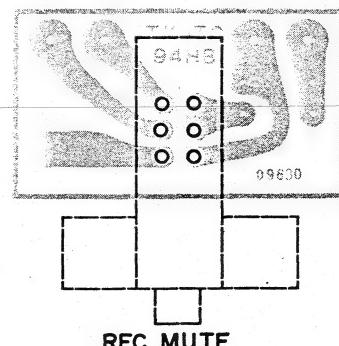
L.E.D. P.C.BOARD

(BOTTOM VIEW)



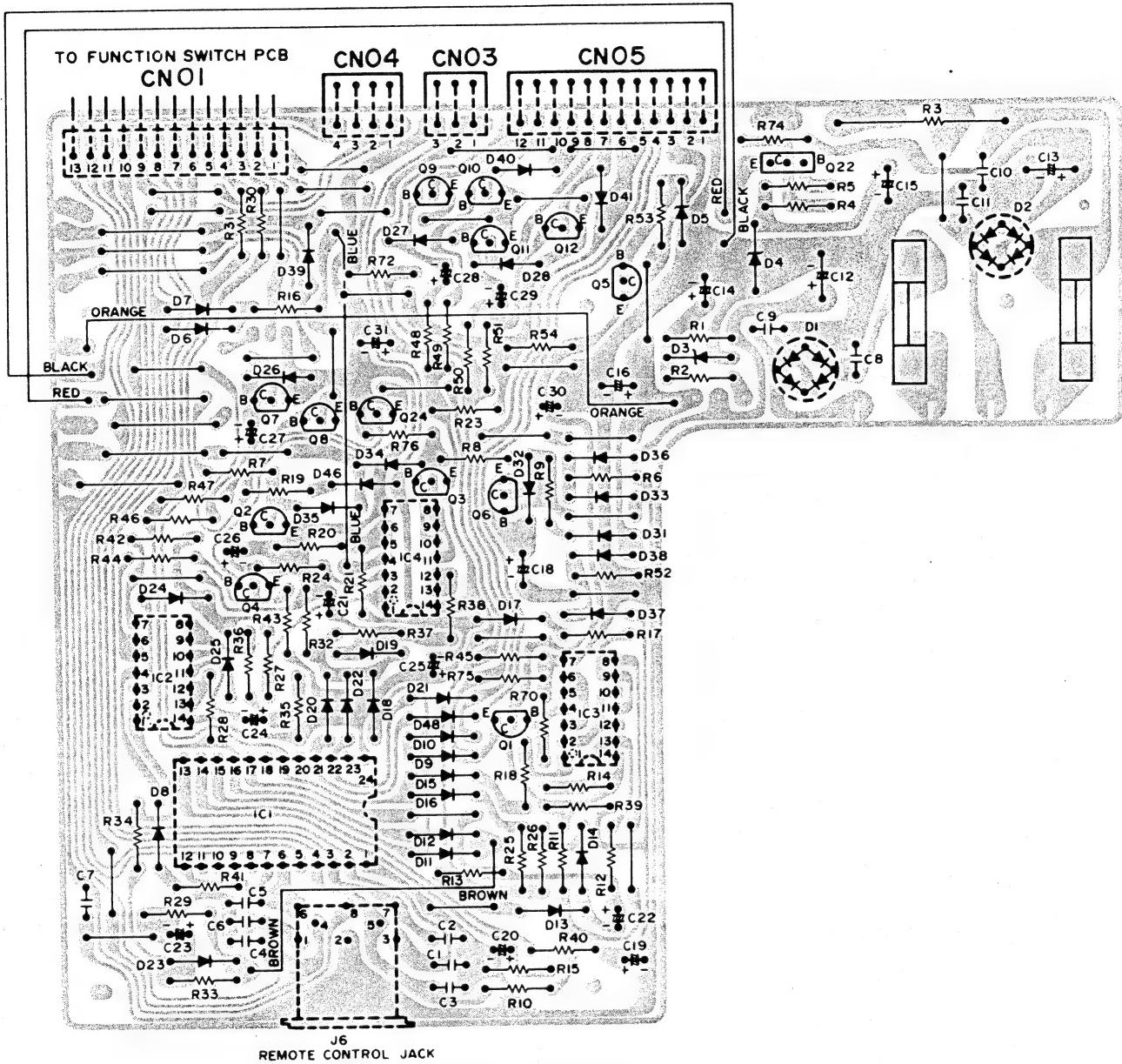
REC MUTE P.C.BOARD

(BOTTOM VIEW)

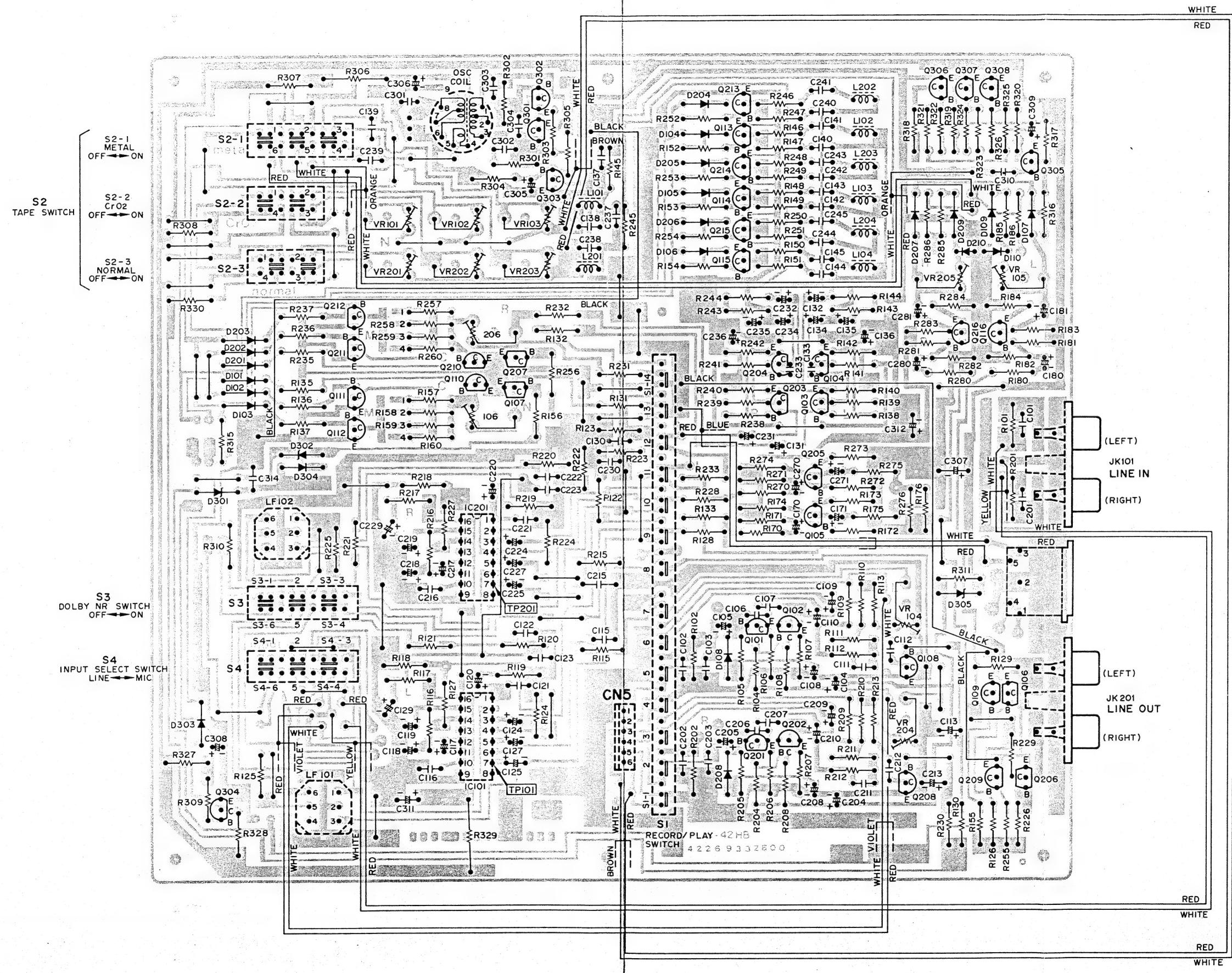


CONTROL P.C.BOARD

(BOTTOM VIEW)

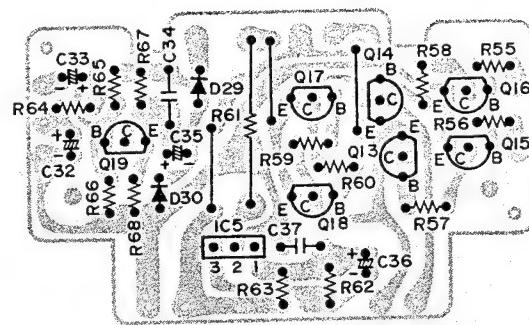


RP, PB, PRE, OSC P.C.BOARD
(BOTTOM VIEW)

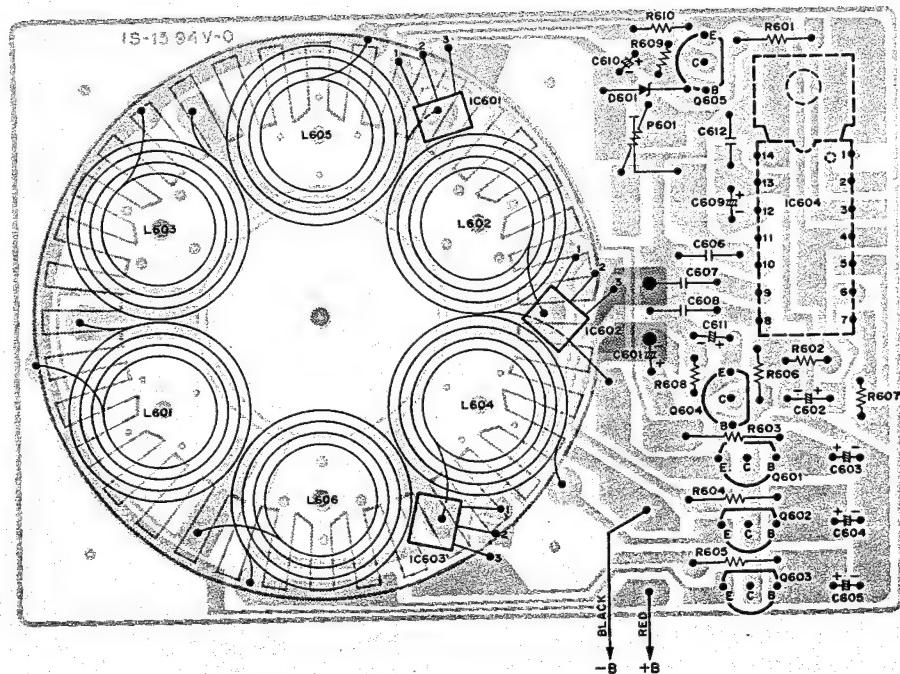


SUB CONTROL P.C.BOARD

(BOTTOM VIEW)



DD GOVENOR P.C.BOARD
(BOTTOM VIEW)



PARTS LIST

RP, PB, PRE, OSC P.C.B. Assy
1310 4001 08161

Ref. No.	Parts Number	Description	Ref. No.	Parts Number	Description
	4 2359 71550	DIN Socket 5P			CAPACITORS
	4 2369 71452	Connector 6P	C138	C1HCDK680SL	Ceramic 68 pF 50V ±10%
JK101,201	4 2359 73602	2P Jack	C139	C1HCDK151SL	Ceramic 150 pF 50V ±10%
L101	4 2729 70290	Coil 333	C140	C1HFRK393A	Mylar 0.039 μF 50V ±10%
L102,103	4 2729 70250	Coil 332	C141	C1HFRK273A	Mylar 0.027 μF 50V ±10%
104			C142	C1HFRK473A	Mylar 0.047 μF 50V ±10%
L201	4 2729 70290	Coil 333	C143	C1HFRK273A	Mylar 0.027 μF 50V ±10%
L202,203	4 2729 70250	Coil 332	C144	C1HFRK473A	Mylar 0.047 μF 50V ±10%
204			C145	C1HFRK183A	Mylar 0.018 μF 50V ±10%
LF101,201	4 2729 70341	Dolby Filter	C170,171	C1HRE-106A	Electrolytic 10 μF 50V
S01	4 2319 73900	Slide Switch	C180	C1CRE-106A	Electrolytic 10 μF 16V
S02	4 2319 74450	Push Switch 6	C181	C1CRE-105A	Electrolytic 1 μF 16V
S03,04	4 2319 74470	Push Switch	C201	C1HCDK101SL	Ceramic 100 pF 50V ±10%
VR101	4 2222 00960	VR 100k-B (Bias Adj.)	C202	C1HYDK102R	Ceramic 0.001 μF 50V ±10%
VR102	4 2222 00960	VR 100k-B (Bias Adj.)	C203	C1HYDK561R	Ceramic 560 pF 50V ±10%
VR103	4 2222 00960	VR 100k-B (Bias Adj.)	C204	C1CRE-476A	Electrolytic 47 μF 16V
VR104	4 2222 01040	VR 20k-B (PB Gain Adj.)	C205	C1HRE-106A	Electrolytic 10 μF 50V
VR105	4 2222 01400	VR 10k-B (Meter Adj.)	C206	C1HYDK471R	Ceramic 470 pF 50V ±10%
VR106	4 2222 01040	VR 20k-B (Rec./PB Sens. Adj.)	C207	C1HCDK560SL	Ceramic 56 pF 50V ±10%
VR201	4 2222 00960	VR 100k-B (Bias Adj.)	C208	C1ARE-476A	Electrolytic 47 μF 10V
VR202	4 2222 00960	VR 100k-B (Bias Adj.)	C209,210	C1HRE-106A	Electrolytic 10 μF 50V
VR203	4 2222 00960	VR 100k-B (Bias Adj.)	C211	C1HFRK103A	Mylar 0.01 μF 50V ±10%
VR204	4 2222 01040	VR 20k-B (PB Gain Adj.)	C212	C1HFRK223A	Mylar 0.022 μF 50V ±10%
VR205	4 2222 01400	VR 10k-B (Meter Adj.)	C213	C1HRE-105A	Electrolytic 1 μF 50V
VR206	4 2222 01040	VR 20k-B (Rec./PB Sens. Adj.)	C215	C1HYDK221R	Ceramic 220 pF 50V ±10%
OSC01	4 2582 00400	OSC Coil	C216	C1HFRK473A	Mylar 0.047 μF 50V ±10%
CAPACITORS			C217	C1CRE-106A	Electrolytic 10 μF 16V
C101	C1HCDK101SL	Ceramic 100 pF 50V ±10%	C218	C1CUEX104A	Sint. Alu. 0.1 μF 16V +40,-20%
C102	C1HYDK102R	Ceramic 0.001 μF 50V ±10%	C219	C1CUEX334A	Sint. Alu. 0.33 μF 16V +40,-20%
C103	C1HYDK561R	Ceramic 560 pF 50V ±10%	C220	C1CRE-106A	Electrolytic 10 μF 16V
C104	C1CRE-476A	Electrolytic 47 μF 16V	C221	C1HFRK472A	Mylar 0.0047 μF 50V ±10%
C105	C1HRE-106A	Electrolytic 10 μF 50V	C222	C1HFRK562A	Mylar 0.0056 μF 50V ±10%
C106	C1HYDK471R	Ceramic 470 pF 50V ±10%	C223	C1HFRK273A	Mylar 0.027 μF 50V ±10%
C107	C1HCDK560SL	Ceramic 56 pF 50V ±10%	C224,225	C1CRE-106A	Electrolytic 10 μF 16V
C108	C1ARE-476A	Electrolytic 47 μF 10V	C227	C1CRE-105A	Electrolytic 1 μF 16V
C109,110	C1HRE-106A	Electrolytic 10 μF 50V	C229	C1CRE-227A	Electrolytic 220 μF 16V
C111	C1HFRK103A	Mylar 0.01 μF 50V ±10%	C230	C1HYDK102R	Ceramic 0.001 μF 50V ±10%
C112	C1HFRK223A	Mylar 0.022 μF 50V ±10%	C231	C1HRE-474A	Electrolytic 0.47 μF 50V
C113	C1HRE-105A	Electrolytic 1 μF 50V	C232	C1CRE-106A	Electrolytic 10 μF 16V
C115	C1HYDK221R	Ceramic 220 pF 50V ±10%	C233	C1HCDJ150SL	Ceramic 15 pF 50V ±5%
C116	C1HFRK473A	Mylar 0.047 μF 50V ±10%	C234	C1CRE-106A	Electrolytic 10 μF 16V
C117	C1CRE-106A	Electrolytic 10 μF 16V	C235	C1HRE-474A	Electrolytic 0.47 μF 50V
C118	C1CUEX104A	Sint. Alu. 0.1 μF 16V +40,-20%	C236	C1ARE-107A	Electrolytic 100 μF 10V
C119	C1CUEX334A	Sint. Alu. 0.33 μF 16V +40,-20%	C237	C1HYDK681R	Ceramic 680 pF 50V ±10%
C120	C1CRE-106A	Electrolytic 10 μF 16V	C238	C1HCDK680SL	Ceramic 68 pF 50V ±10%
C121	C1HFRK472A	Mylar 0.0047 μF 50V ±10%	C239	C1HCDK151SL	Ceramic 150 pF 50V ±10%
C122	C1HFRK562A	Mylar 0.0056 μF 50V ±10%	C240	C1HFRK393A	Mylar 0.039 μF 50V ±10%
C123	C1HFRK273A	Mylar 0.027 μF 50V ±10%	C241	C1HFRK273A	Mylar 0.027 μF 50V ±10%
C124,125	C1CRE-106A	Electrolytic 10 μF 16V	C242	C1HFRK473A	Mylar 0.047 μF 50V ±10%
C127	C1CRE-105A	Electrolytic 1 μF 16V	C243	C1HFRK273A	Mylar 0.027 μF 50V ±10%
C129	C1CRE-227A	Electrolytic 220 μF 16V	C244	C1HFRK473A	Mylar 0.047 μF 50V ±10%
C130	C1HYDK102R	Ceramic 0.001 μF 50V ±10%	C245	C1HFRK183A	Mylar 0.018 μF 50V ±10%
C131	C1HRE-474A	Electrolytic 0.47 μF 50V	C270,271	C1HRE-106A	Electrolytic 10 μF 50V
C132	C1CRE-106A	Electrolytic 10 μF 16V	C280	C1CRE-106A	Electrolytic 10 μF 16V
C133	C1HCDJ150SL	Ceramic 15 pF 50V ±5%	C281	C1CRE-105A	Electrolytic 1 μF 16V
C134	C1CRE-106A	Electrolytic 10 μF 16V	C301	C2BSEJ272A	Styrol 2700 pF 125V ±5%
C135	C1HRE-474A	Electrolytic 0.47 μF 50V	C302,303	C1HFRK472A	Mylar 0.0047 μF 50V ±10%
C136	C1ARE-107A	Electrolytic 100 μF 10V	C304	C1HFRK103A	Mylar 0.01 μF 50V ±10%
C137	C1HYDK681R	Ceramic 680 pF 50V ±10%	C305	C1ARE-107A	Electrolytic 100 μF 10V

PARTS LIST (Continued)

Ref. No.	Parts Number	Description			Ref. No.	Parts Number	Description			
CAPACITORS				RESISTORS						
C306	C1HRE-105A	Electrolytic	1 μ F	50V	R129	R2EDZJ472APA	Carbon	4.7k	1/4W $\pm 5\%$	
C307	C1ERE-477A	Electrolytic	470 μ F	25V	R130	R2EDZJ473APA	Carbon	47k	1/4W $\pm 5\%$	
C308	C1HRE-105A	Electrolytic	1 μ F	50V	R131	R2EDZJ183APA	Carbon	18k	1/4W $\pm 5\%$	
C309	C1ARE-475A	Electrolytic	4.7 μ F	10V	R132	R2EDZJ101APA	Carbon	100	1/4W $\pm 5\%$	
C310	C1HFRK102A	Mylar	0.001 μ F	50V $\pm 10\%$	R133	R2EDZJ472APA	Carbon	4.7k	1/4W $\pm 5\%$	
C311,312	C1ERE-477A	Electrolytic	470 μ F	25V	R135,136	R2EDZJ473APA	Carbon	47k	1/4W $\pm 5\%$	
C314	C1HFRK103A	Mylar	0.01 μ F	50V $\pm 10\%$	137					
SEMICONDUCTORS				R138	R2EDZJ124APA	Carbon	120k	1/4W	$\pm 5\%$	
D101,102	202 5 3880 44810	Diode, DS448	R139	R3EDZJ123APA	Carbon	12k	1/4W	$\pm 5\%$		
103,104,105			R140	R2EDZJ102APA	Carbon	1k	1/4W	$\pm 5\%$		
106,107,108			R141	R2EDZJ272APA	Carbon	2.7k	1/4W	$\pm 5\%$		
D109,110	202 5 9110 18820	Diode, 1S188	R142	R2EDZJ681APA	Carbon	680	1/4W	$\pm 5\%$		
D201,202	202 5 3880 44810	Diode, DS448	R143	R2EDZJ272APA	Carbon	2.7k	1/4W	$\pm 5\%$		
203,204,205			R144	R2EDZJ392APA	Carbon	3.9k	1/4W	$\pm 5\%$		
206,207,208			R145	R2EDZJ153APA	Carbon	15k	1/4W	$\pm 5\%$		
D209,210	202 5 9110 18820	Diode, 1S188	R146	R2EDZJ101APA	Carbon	100	1/4W	$\pm 5\%$		
D301,302	202 5 3200 03310	Diode, GZA3.3	R147	R2EDZJ562APA	Carbon	5.6k	1/4W	$\pm 5\%$		
D303,304	202 5 3880 44810	Diode, DS448	R148	R2EDZJ101APA	Carbon	100	1/4W	$\pm 5\%$		
D305	202 5 3210 12010	Diode, GZA12L	R149	R2EDZJ122APA	Carbon	1.2k	1/4W	$\pm 5\%$		
IC101,201	4 2069 70380	IC, NE646B	R150	R2EDZJ101APA	Carbon	100	1/4W	$\pm 5\%$		
Q101,102	203 5 5251 57160	TR 2SC1571 F	R151	R2EDZJ182APA	Carbon	1.8k	1/4W	$\pm 5\%$		
103,104,105			R152,153	R2EDZJ473APA	Carbon	47k	1/4W	$\pm 5\%$		
Q106,107	203 5 4921 01260	TR 2SD1012 F, G	154							
Q108,109	TTT-2SC1815-GR	TR 2SC1815	R155,156	R2EDZJ103APA	Carbon	10k	1/4W	$\pm 5\%$		
110,111,112,113			R157	R2EDZJ182APA	Carbon	1.8k	1/4W	$\pm 5\%$		
114,115,116			R158	R2EDZJ472APA	Carbon	4.7k	1/4W	$\pm 5\%$		
Q201,202	203 5 5251 57160	TR 2SC1571 F	R159	R2EDZJ103APA	Carbon	10k	1/4W	$\pm 5\%$		
203,204,205			R160	R2EDZJ153APA	Carbon	15k	1/4W	$\pm 5\%$		
Q206,207	203 5 4921 01260	TR 2SD1012 F, G	R170	R2EDZJ332APA	Carbon	3.3k	1/4W	$\pm 5\%$		
Q208,209	TTT-2SC1815-GR	TR 2SC1815	R171	R2EDZJ104APA	Carbon	100k	1/4W	$\pm 5\%$		
210,211,212,213,214,215			R172	R2EDZJ153APA	Carbon	15k	1/4W	$\pm 5\%$		
216,301,302,303,304,305			R173	R2EDZJ101APA	Carbon	100	1/4W	$\pm 5\%$		
306,307,308			R174	R2EDZJ681APA	Carbon	680	1/4W	$\pm 5\%$		
RESISTORS				R175	R2EDZJ820APA	Carbon	82	1/4W	$\pm 5\%$	
R101	R2EDZJ223APA	Carbon	22k	1/4W	$\pm 5\%$	R176	R2EDZJ392APA	Carbon	3.9k	1/4W $\pm 5\%$
R102	R2EDZJ103APA	Carbon	10k	1/4W	$\pm 5\%$	R180	R2EDZJ103APA	Carbon	10k	1/4W $\pm 5\%$
R104	R2EDZJ274APA	Carbon	270k	1/4W	$\pm 5\%$	R181	R2EDZJ184APA	Carbon	180k	1/4W $\pm 5\%$
R105	R2EDZJ154APA	Carbon	150k	1/4W	$\pm 5\%$	R182	R2EDZJ103APA	Carbon	10k	1/4W $\pm 5\%$
R106	R2EDZJ151APA	Carbon	150	1/4W	$\pm 5\%$	R183	R2EDZJ332APA	Carbon	3.3k	1/4W $\pm 5\%$
R107	R2EDZJ102APA	Carbon	1k	1/4W	$\pm 5\%$	R184	R2EDZJ121APA	Carbon	120	1/4W $\pm 5\%$
R108	R2EDZJ153APA	Carbon	15k	1/4W	$\pm 5\%$	R185	R2EDZJ182APA	Carbon	1.8k	1/4W $\pm 5\%$
R109	R2EDZJ822APA	Carbon	8.2k	1/4W	$\pm 5\%$	R186	R2EDZJ272APA	Carbon	2.7k	1/4W $\pm 5\%$
R110	R2EDZJ222APA	Carbon	2.2k	1/4W	$\pm 5\%$	R201	R2EDZJ223APA	Carbon	22k	1/4W $\pm 5\%$
R111	R2EDZJ113APA	Carbon	11k	1/4W	$\pm 5\%$	R202	R2EDZJ103APA	Carbon	10k	1/4W $\pm 5\%$
R112	R2EDZJ564APA	Carbon	560k	1/4W	$\pm 5\%$	R204	R2EDZJ274APA	Carbon	270k	1/4W $\pm 5\%$
R113	R2EDZJ272APA	Carbon	2.7k	1/4W	$\pm 5\%$	R205	R2EDZJ154APA	Carbon	150k	1/4W $\pm 5\%$
R115	R2EDZJ222APA	Carbon	2.2k	1/4W	$\pm 5\%$	R206	R2EDZJ151APA	Carbon	150	1/4W $\pm 5\%$
R116	R2EDZJ274APA	Carbon	270k	1/4W	$\pm 5\%$	R207	R2EDZJ102APA	Carbon	1k	1/4W $\pm 5\%$
R117,118	R2EDZJ102APA	Carbon	1k	1/4W	$\pm 5\%$	R208	R2EDZJ153APA	Carbon	15k	1/4W $\pm 5\%$
R119	R2EDZJ473APA	Carbon	47k	1/4W	$\pm 5\%$	R209	R2EDZJ822APA	Carbon	8.2k	1/4W $\pm 5\%$
R120	R2EDZJ105APA	Carbon	1M	1/4W	$\pm 5\%$	R210	R2EDZJ222APA	Carbon	2.2k	1/4W $\pm 5\%$
R121	R2EDZJ181APA	Carbon	180	1/4W	$\pm 5\%$	R211	R2EDZJ113APA	Carbon	11k	1/4W $\pm 5\%$
R122,123	R2EDZJ473APA	Carbon	47k	1/4W	$\pm 5\%$	R212	R2EDZJ564APA	Carbon	560k	1/4W $\pm 5\%$
R124	R2EDZJ332APA	Carbon	3.3k	1/4W	$\pm 5\%$	R213	R2EDZJ272APA	Carbon	2.7k	1/4W $\pm 5\%$
R125	R2EDZJ105APA	Carbon	1M	1/4W	$\pm 5\%$	R215	R2EDZJ222APA	Carbon	2.2k	1/4W $\pm 5\%$
R126	R2EDZJ123APA	Carbon	12k	1/4W	$\pm 5\%$	R216	R2EDZJ274APA	Carbon	270k	1/4W $\pm 5\%$
R127	R2EDZJ184APA	Carbon	180k	1/4W	$\pm 5\%$	R217,218	R2EDZJ102APA	Carbon	1k	1/4W $\pm 5\%$
R128	R2EDZJ102APA	Carbon	1k	1/4W	$\pm 5\%$	R219	R2EDZJ473APA	Carbon	47k	1/4W $\pm 5\%$
						R220	R2EDZJ105APA	Carbon	1M	1/4W $\pm 5\%$
						R221	R2EDZJ181APA	Carbon	180	1/4W $\pm 5\%$
						R222,223	R2EDZJ473APA	Carbon	47k	1/4W $\pm 5\%$

PARTS LIST (Continued)

Ref. No.	Parts Number	Description					Ref. No.	Parts Number	Description				
RESISTORS							RESISTORS						
R224	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%		R321	R2EDZJ393APA	Carbon	39k	1/4W	±5%	
R225	R2EDZJ105APA	Carbon	1M	1/4W	±5%		R322	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%	
R226	R2EDZJ123APA	Carbon	12k	1/4W	±5%		R323	R2EDZJ153APA	Carbon	15k	1/4W	±5%	
R227	R2EDZJ184APA	Carbon	180k	1/4W	±5%		R324	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%	
R228	R2EDZJ102APA	Carbon	1k	1/4W	±5%		R325	R2EDZJ562APA	Carbon	5.6k	1/4W	±5%	
R229	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%		R326	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%	
R230	R2EDZJ473APA	Carbon	47k	1/4W	±5%		R327	R2EDZJ683APA	Carbon	68k	1/4W	±5%	
R231	R2EDZJ183APA	Carbon	18k	1/4W	±5%		R328	R2EDZJ103APA	Carbon	10k	1/4W	±5%	
R232	R2EDZJ101APA	Carbon	100	1/4W	±5%		R329	R3AXBJ221A	Oxide Metal Film	220 1W	±5%		
R233	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%		R330	R2EDZJ823APA	Carbon	82k	1/4W	±5%	
R235,236	R2EDZJ473APA	Carbon	47k	1/4W	±5%								
237													
R238	R2EDZJ124APA	Carbon	120k	1/4W	±5%								
R239	R2EDZJ123APA	Carbon	12k	1/4W	±5%								
R240	R2EDZJ102APA	Carbon	1k	1/4W	±5%								
R241	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%								
R242	R2EDZJ681APA	Carbon	680	1/4W	±5%								
R243	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%								
R244	R2EDZJ392APA	Carbon	3.9k	1/4W	±5%		CN01	4 2369 71650	Connector	13P			
R245	R2EDZJ153APA	Carbon	15k	1/4W	±5%		CN02	4 2359 74850	DIN Socket	8P			
R246	R2EDZJ101APA	Carbon	100	1/4W	±5%		CN03	4 2369 73100	Connector	3P			
R247	R2EDZJ562APA	Carbon	5.6k	1/4W	±5%		CN04	4 2369 73110	Connector	4P			
R248	R2EDZJ101APA	Carbon	100	1/4W	±5%		CN05	4 2369 73120	Connector	12P			
R249	R2EDZJ122APA	Carbon	1.2k	1/4W	±5%								
R250	R2EDZJ101APA	Carbon	100	1/4W	±5%								
R251	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%								
R252,253	R2EDZJ473APA	Carbon	47k	1/4W	±5%		C01,02	C1HYDZ103A	Ceramic	0.01 μF	50V	+80,-20%	
254							03,04,05,06,07						
R255,256	R2EDZJ103APA	Carbon	10k	1/4W	±5%		C08,09	C1HYDZ473A	Ceramic	0.047 μF	50V	+80,-20%	
R257	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%		10,11						
R258	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%		C12	C1ERE-228A	Electrolytic	2200 μF	25V		
R259	R2EDZJ103APA	Carbon	10k	1/4W	±5%		C13	C1HRE-108A	Electrolytic	1000 μF	50V		
R260	R2EDZJ153APA	Carbon	15k	1/4W	±5%		C14	C1CRE-477A	Electrolytic	470 μF	16V		
R270	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%		C15	C1ERE-477A	Electrolytic	470 μF	25V		
R271	R2EDZJ104APA	Carbon	100k	1/4W	±5%		C16,18	C1CRE-108A	Electrolytic	1000 μF	16V		
R272	R2EDZJ153APA	Carbon	15k	1/4W	±5%		C19	4 2232 00640	Electrolytic	10 μF	16V	±10%	
R273	R2EDZJ101APA	Carbon	100	1/4W	±5%		C20	C1AUEX225A	Sint. Alu.	2.2 μF	10V	+40,-20%	
R274	R2EDZJ681APA	Carbon	680	1/4W	±5%		C21	C1ARE-474A	Electrolytic	0.47 μF	10V		
R275	R2EDZJ820APA	Carbon	82	1/4W	±5%		C22	C1ARE-107A	Electrolytic	100 μF	10V		
R276	R2EDZJ392APA	Carbon	3.9k	1/4W	±5%		C23	C1HRE-225A	Electrolytic	2.2 μF	50V		
R280	R2EDZJ103APA	Carbon	10k	1/4W	±5%		C24	C1ARE-475A	Electrolytic	4.7 μF	10V		
R281	R2EDZJ184APA	Carbon	180k	1/4W	±5%		C25	4 2232 00640	Electrolytic	10 μF	16V	±10%	
R282	R2EDZJ103APA	Carbon	10k	1/4W	±5%		C26	C1ARE-105A	Electrolytic	1 μF	10V		
R283	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%		C27	C1ARE-476A	Electrolytic	47 μF	10V		
R284	R2EDZJ121APA	Carbon	120	1/4W	±5%		C28	C1ARE-336A	Electrolytic	33 μF	10V		
R285	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%		C29	C1ARE-476A	Electrolytic	47 μF	10V		
R286	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%		C30	C1ARE-107A	Electrolytic	100 μF	10V		
R301,302	R2EDZJ823APA	Carbon	82k	1/4W	±5%		C31	C0JRE-477A	Electrolytic	470 μF	6.3V		
R303	R2EDZJ100APA	Carbon	10	1/4W	±5%								
R304	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%								
R305	R2EDZJ562APA	Carbon	5.6k	1/4W	±5%		D01,02	DGG-W02	Bridge Diode,	W02			
R306	R3AXBJ121A	Oxide Metal Film	120 1W	±5%			D03	202 5 3210 13020	Diode,	GZA13U			
R307	R2EDZJ181APA	Carbon	180	1/4W	±5%		D04	202 5 3210 24020	Diode,	GZA24U			
R308	R2EDZJ271APA	Carbon	270	1/4W	±5%		D05	202 5 3210 08210	Diode,	GZA8.2L			
R309	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%		D06,07	202 5 3880 44810	Diode,	DS448			
R310	R2EDZJ561APA	Carbon	560	1/4W	±5%			08,09,10,11,12,13,14,15,16,17,18,19,20					
R311	R2EDZJ822APA	Carbon	8.2k	1/4W	±5%			21,22,23,24,25,26,27,28,29,30,31,32,33					
R315	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%			34,35,36,37,38					
R316	R2EDZJ103APA	Carbon	10k	1/4W	±5%		D39,40	202 5 2500 13541	Diode,	DS135D			
R317	R2EDZJ561APA	Carbon	560	1/4W	±5%			41					
R318,319	R2EDZJ122APA	Carbon	1.2k	1/4W	±5%		D46,48	202 5 3880 44810	Diode,	DS448			

PARTS LIST (Continued)

Ref. No. Parts Number Description
SEMICONDUCTORS

IC01	4 2069 70390	IC, TC9121P
IC02,03	206 5 9504 01110	IC, LC4011
04		
Q01,02	TTT-2SC1815-GR	TR 2SC1815 GR, BL
03,04,05		
Q06	203 5 4580 69850	TR 2SB698 E, F
Q07,08	203 5 6940 54560	TR 2SD545 F
09,10,11,12		
Q22	4 2039 70601	TR 2SC1846R
Q24	TTT-2SC1815-BL	TR 2SC1815 BL

RESISTORS

R01	R2EDZJ561APA	Carbon	560	1/4W	±5%
R02	R2EDZJ100APA	Carbon	10	1/4W	±5%
R03	R3DZPK270A	Fuse	27	2W	±10%
R04	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R05	R2EDZJ100APA	Carbon	10	1/4W	±5%
R06	R2EDZJ333APA	Carbon	33k	1/4W	±5%
R07,08	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%
R09	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R10	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R11	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R12	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R13	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R14	R2EDZJ154APA	Carbon	150k	1/4W	±5%
R15	R2EDZJ333APA	Carbon	33k	1/4W	±5%
R16	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R17,18	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R19	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R20	R2EDZJ105APA	Carbon	1M	1/4W	±5%
R21	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R23	R2EDZJ561APA	Carbon	560	1/4W	±5%
R24	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R25	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R26	R2EDZJ101APA	Carbon	100	1/4W	±5%
R27	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R28	R2EDZJ154APA	Carbon	150k	1/4W	±5%
R29	R2EDZJ333APA	Carbon	33k	1/4W	±5%
R30,31	R2EDZJ153APA	Carbon	15k	1/4W	±5%
R32	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R33	R2EDZJ154APA	Carbon	150k	1/4W	±5%
R34	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R35	R2EDZJ154APA	Carbon	150k	1/4W	±5%
R36	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R37	R2EDZJ224APA	Carbon	220k	1/4W	±5%
R38	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R39	R2EDZJ514APA	Carbon	510k	1/4W	±5%
R40	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R41	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R42	R2EDZJ154APA	Carbon	150k	1/4W	±5%
R43	R2EDZJ333APA	Carbon	33k	1/4W	±5%
R44	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R45	R2EDZJ473APA	Carbon	47k	1/4W	±5%
R46	R2EDZJ471APA	Carbon	470	1/4W	±5%
R47	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R48	R2EDZJ471APA	Carbon	470	1/4W	±5%
R49	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R50	R2EDZJ471APA	Carbon	470	1/4W	±5%
R51	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R52	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R53	R2EDZJ102APA	Carbon	1k	1/4W	±5%

Ref. No. Parts Number Description
RESISTORS

R54	R2EDZJ561APA	Carbon	560	1/4W	±5%
R70	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%
R72	R2EDZJ153APA	Carbon	15k	1/4W	±5%
R74	R2EDPJ3R3A	Carbon	3.3	1/4W	±5%
R75	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R76	R2EDZJ104APA	Carbon	100k	1/4W	±5%

REGULATOR P.C.B. Assy

131 0 4001 08190

Ref. No. Parts Number Description
SEMICONDUCTORS

Q21 203 5 7330 61261 TR 2SD612K

SWITCH BOARD P.C.B. Assy

131 0 4001 08200

Ref. No. Parts Number Description

4 2312 02750	Key Board Switch
4 6122 02500	Pilot Lamp

SEMICONDUCTORS

Q01,02 203 5 5000 53660 TR 2SC536 F, G

03

RESISTORS

R01,02 R2EDPJ121A Carbon 120 1/4W ±5%

03

VOLUME P.C.B. Assy

131 0 4001 08220

Ref. No. Parts Number Description

4 2222 02210 VR 50k-Ax2

PEAK LEVEL P.C.B. Assy

131 0 4001 08230

Ref. No. Parts Number Description
SEMICONDUCTORS

D310,311 DWW-LN224RP L.E.D., LN224RP (Red)

312

DOLBY IND. P.C.B. Assy

131 0 4001 08240

Ref. No. Parts Number Description
SEMICONDUCTOR

DWW-LN322GP L.E.D., LN322GP (Green)

PARTS LIST (Continued)

REC MUTE P.C.B. Assy
131 0 4001 08250

Ref. No.	Parts Number	Description
	4 2312 02940	Switch Push 1Key

TIMER P.C.B. Assy
131 0 4001 08260

Ref. No.	Parts Number	Description
	4 2312 02410	Switch Push 1Key
	4 2359 75051	Connector 3P Assy

SEMICONDUCTOR

D47	202 5 2810 44255	Diode, DS442
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RESISTOR

R22	R2EDUJ102A	Carbon	1k	1/4W	±5%
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HALL IC P.C.B. Assy
131 0 4001 08270

Ref. No.	Parts Number	Description
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SEMICONDUCTOR

IC06	IWW-DN835	IC, DN835
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L.E.D. P.C.B. Assy
131 0 4001 08340

Ref. No.	Parts Number	Description
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SEMICONDUCTOR

D309	DWW-LN222RP	L.E.D., LN222RP (Red)
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SUB CONTROL P.C.B. Assy
131 0 4001 08180

Ref. No.	Parts Number	Description
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	4 2359 75053	Connector 12P Assy
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CAPACITORS

C32	C1ARE-107A	Electrolytic	100 µF	10V	
C33	C1ARE-106A	Electrolytic	10 µF	10V	
C34	C1HFRK473A	Mylar	0.047 µF	50V	±10%
C35	C1CRE-106A	Electrolytic	10 µF	16V	
C36	C1CRE-105A	Electrolytic	1 µF	16V	
C37	4 2239 70190	Electrolytic	0.1 µF	12V	

SEMICONDUCTORS

D29,30	202 5 2810 44255	Diode, DS442V
Q13,14	203 5 4580 69850	TR 2SB698 E, F
Q15,16	TTT-2SC1815-BL	TR 2SC1815 BL, GR
Q17,18	203 5 6940 54560	TR 2SD545F
Q19	TTT-2SC1815-BL	TR 2SC1815 BL, GR
IC05	4 2069 70870	IC, µPC1447H

Ref. No.	Parts Number	Description
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RESISTORS

R55,56	R2EDUJ472A	Carbon	4.7k	1/4W	±5%
R57,58	R2EDUJ152A	Carbon	1.5k	1/4W	±5%
R59,60	R2EDUJ561A	Carbon	560	1/4W	±5%
R61	R3AXBJ330A	Oxide Metal Film	33 1W	±5%	
R62	R2EDUJ821A	Carbon	820	1/4W	±5%
R63	R2EDUJ911A	Carbon	910	1/4W	±5%
R64	R2EDUJ102A	Carbon	1k	1/4W	±5%
R65	R2EDUJ274A	Carbon	270k	1/4W	±5%
R66	R2EDUJ183A	Carbon	18k	1/4W	±5%
R67	R2EDUJ103A	Carbon	10k	1/4W	±5%
R68	R2EDUJ101A	Carbon	100	1/4W	±5%

DD GOVENOR P.C.B. Assy

141 0 3519 19100

Ref. No.	Parts Number	Description
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VR601	4 2229 73250	VR 30k-B
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CAPACITORS

C601	C1CRE-105A	Electrolytic	1 µF	16V	
C602,603	C1CUEX104A	Sint. Alu.	0.1 µF	16V	+40,-20%
604,605					
C606	C1HFRJ183A	Mylar	0.018 µF	50V	±5%
C607,608	C1HYDK822R	Ceramic	0.0082 µF	50V	±10%
C609	C1VTRM104A	Tantalum	0.1 µF	35V	±20%
C610	C1CRE-226A	Electrolytic	22 µF	16V	
C611	C1CRE-336A	Electrolytic	33 µF	16V	
C612	C1EBDK473X	Semiconductor	0.047 µF	25V	±10%

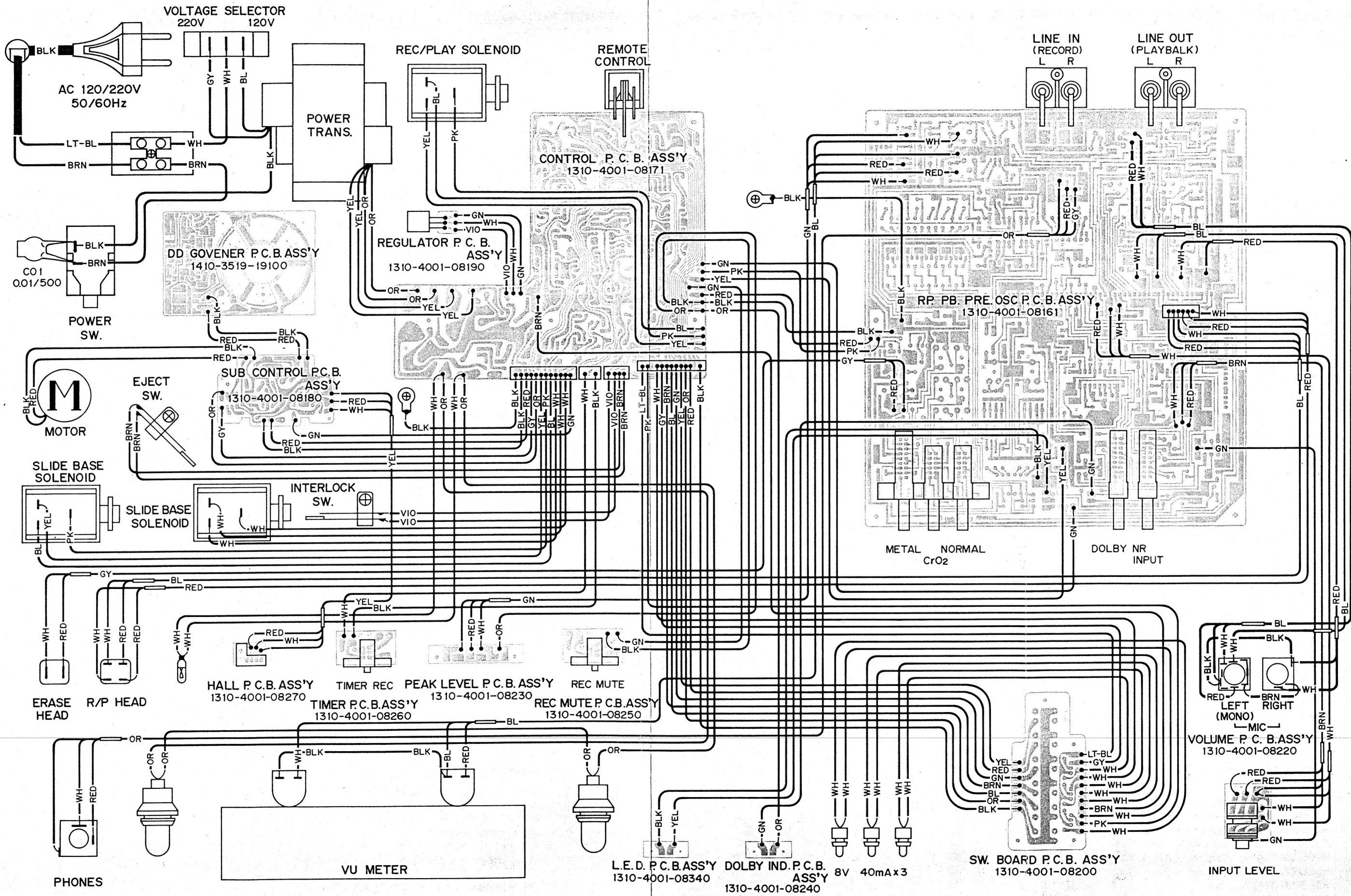
SEMICONDUCTORS

D601	202 5 3210 12010	Diode, GZA12L
IC601,602	4 2039 70670	IC, DN6839
603		
IC604	206 5 2491 60110	IC, LB1601
Q601	203 5 4580 69860	TR 2SB698 F
602,603		
Q604	203 5 5000 53660	TR 2SC536 F
605		

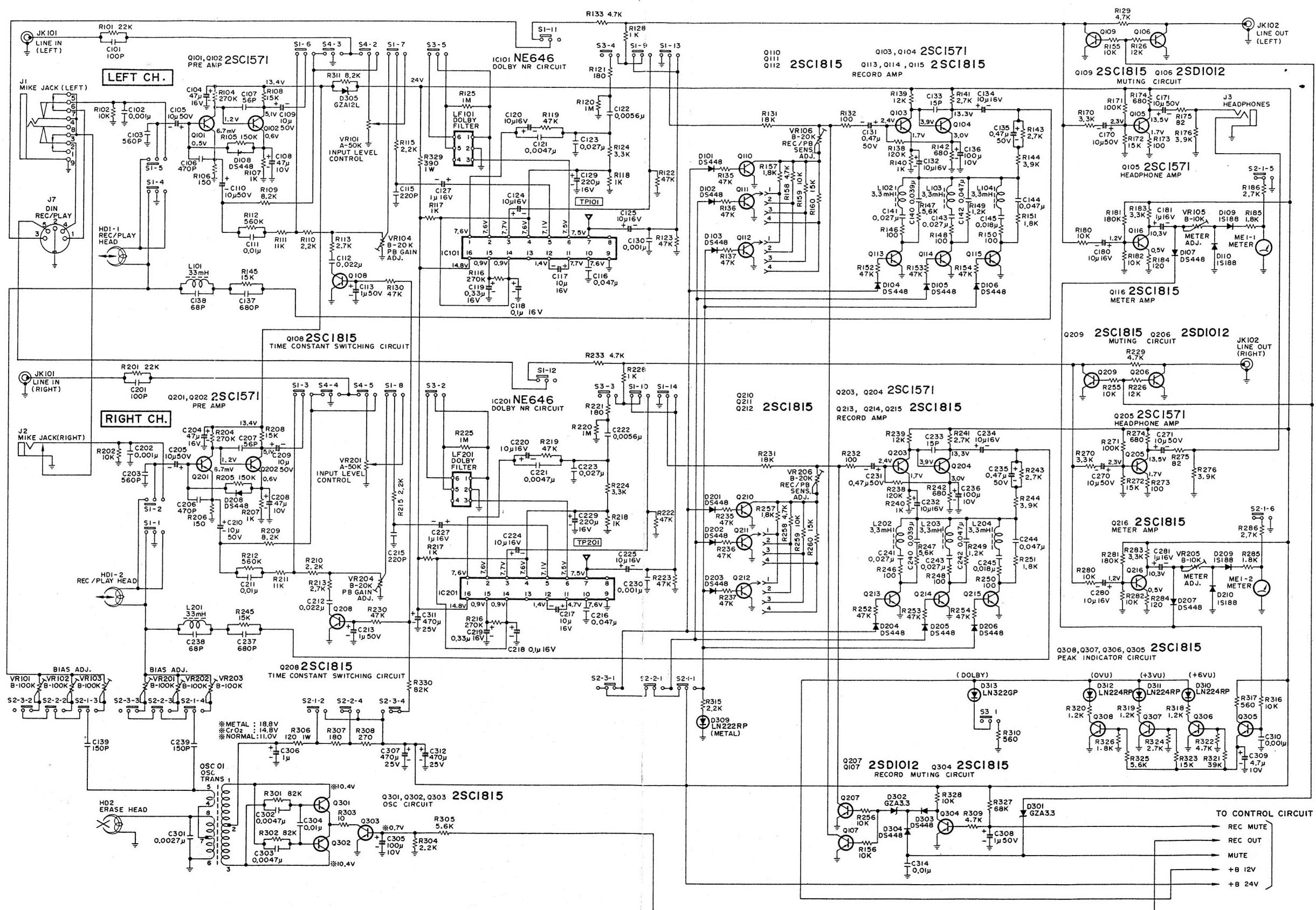
RESISTORS

R601	R2EDUJ124A	Carbon	120k	1/4W	±5%
R602	R2EDUJ103A	Carbon	10k	1/4W	±5%
R603,604	R2EDUJ102A	Carbon	1k	1/4W	±5%
605					
R606	R2EDUJ564A	Carbon	560k	1/4W	±5%
R607	R2EDUJ102A	Carbon	1k	1/4W	±5%
R608	R2EDUJ101A	Carbon	100	1/4W	±5%
R609	R2EDUJ561A	Carbon	560	1/4W	±5%
R610	R2EDUJ100A	Carbon	10	1/4W	±5%

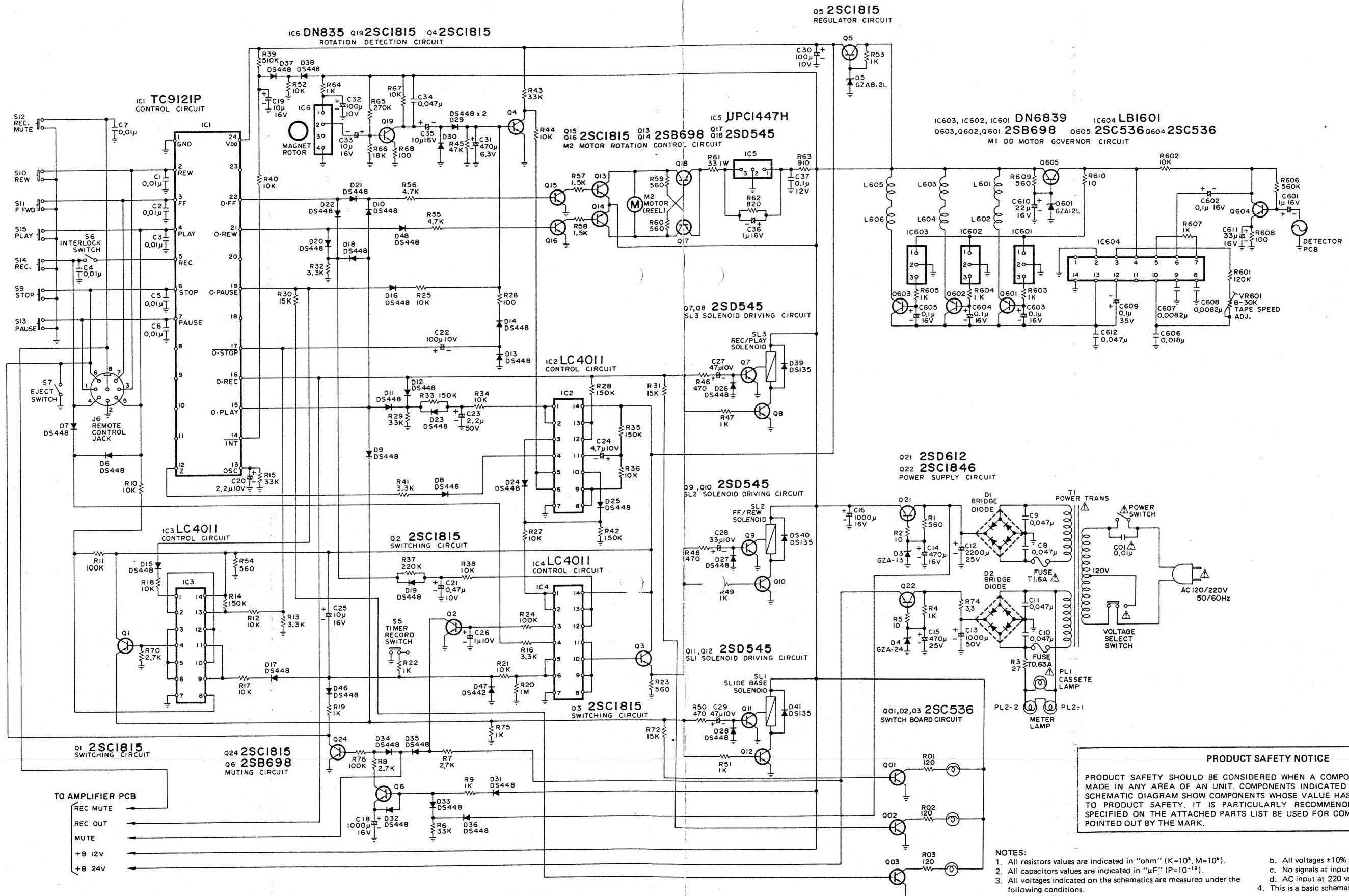
POINT TO POINT WIRING DIAGRAM



SCHEMATIC DIAGRAM(Amplifier Section)

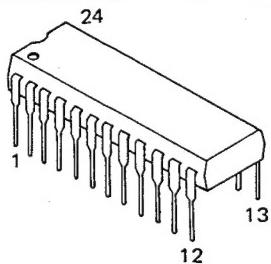


SCHEMATIC DIAGRAM(Control Section)

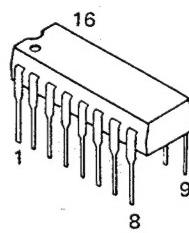


SEMICONDUCTOR LEAD IDENTIFICATION

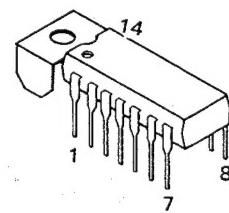
INTEGRATED CIRCUITS



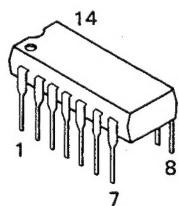
• TC9121



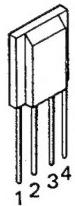
• NE646B



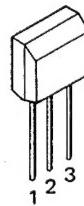
• LB1601



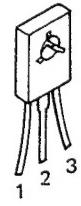
• LC4011



• DN835



• DN6839



• μ PC1447

TRANSISTORS



• 2SD1012

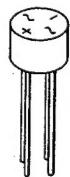


• 2SC1846
• 2SC612

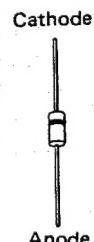


- 2SB698
- 2SC536
- 2SC1571
- 2SC1815
- 2SD545

DIODES



• W02



- DS135
- DS442
- DS448
- 1S188
- GZA3.3
- GZA8.2L
- GZA12L
- GZA13U
- GZA24U